ANNUAL REPORT OF THE

Virginia Coal and Energy Commission

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 35

COMMONWEALTH OF VIRGINIA
RICHMOND
1991

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REPORT OF THE VIRGINIA COAL AND ENERGY COMMISSION TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA RICHMOND, VIRGINIA 1991

I. EXECUTIVE SUMMARY

The Virginia Coal and Energy Commission held four meetings prior to the 1991 Session of the General Assembly. During August of 1990, the Commission held two meetings in Abingdon. Issues discussed at these meetings included how best to prepare for the day when Virginia's production of coal begins to irreversibly decline, the impacts of proposed amendments to the federal Clean Air Act on Virginia's coal and electric power industry, electric ratepayers, and the Commonwealth as a whole, and transmission capacity and the wheeling of power. At its third meeting, the Commission reviewed issues related to the funding of several state energy programs and the problems which continue to plague cogeneration/power projects seeking air permits. The Commission also received an update on the status of regulations being developed under the new Virginia Gas and Oil Act at its final meeting.

While the Commission met on four separate occasions during the year, the Commission's Energy Preparedness Subcommittee and Coal Subcommittee also held meetings. The Energy Preparedness Subcommittee reviewed the accomplishments and funding of various state energy programs while the Coal Subcommittee studied the impacts to date of Virginia's Coal Employment and Production Incentive Tax Credit.

During the course of the year, the Commission made several recommendations to Virginia's Congressional Delegation and the Governor. The recommendations made to Virginia's Congressional Delegation were as follows:

1. That certain proposed amendments to the federal Clean Air Act relating to units in progress, toxics, visibility protection, nonattainment/NOx controls, and the WEPCO doctrine should be supported, opposed, or modified because of their potential impact upon Virginia's coal and electric industries, electric ratepayers, and the Commonwealth as a whole; and

2. That EPA's regional administrative responsibilities over the Commonwealth should be shifted from EPA's Region III to Region IV so that Virginia might enjoy a more favorable regulatory climate.

The recommendations made to the Governor were as follows:

1. That the Low Income Housing Energy Assistance Program should be provided with at least the same level of funding for fiscal year 1991-92 as it received during fiscal year 1990-91, in order that the program can continue to achieve statewide coverage; and

2. That the Weatherization Assistance Program should be provided with state funding for fiscal year 1991-92 at a level which is sufficient to allow the program to achieve statewide coverage.

II. INTRODUCTION

The Virginia Coal and Energy Commission continued to perform its statutory duties during 1990 by reviewing current and future trends of coal production in the Commonwealth, the potential impacts on Virginia of proposed amendments to the federal Clean Air Act, issues relating to the transmission and wheeling of electricity, the difficulties which proposed cogeneration/power projects continue to encounter in obtaining air permits, the funding of various state energy programs; and the implementation of the Virginia Gas and Oil Act of 1990. This document constitutes the Commission's report of its activities during 1990.

III. SUBCOMMITTEE ACTIVITIES

A. The Energy Preparedness Subcommittee

The Energy Preparedness Subcommittee met in October of 1990 to review the recent accomplishments of various energy programs administered by the Department of Mines, Minerals and Energy (DMME), the Department of Social Services (DSS), and the Department of General Services (DGS). The programs reviewed included the State Energy Conservation Program (SECP), the Energy Extension Service (EES), the Institutional Conservation Program (ICP), the Weatherization Assistance Program (WAP), the Low Income Housing Energy Assistance Program (LIHEAP), and those of DGS's Energy Team. While the SECP, EES, and ICP are administered by DMME's Division of Energy, the DSS administers the WAP and LIHEAP. A brief summary of the purposes, achievements, and past funding of these and other energy-related state programs is attached as Appendix A.

Testimony revealed that while these programs have been very successful to date, their future existence or effectiveness is threatened by reduced funding. DMME's Division of Energy saw a 22 percent reduction in funding for fiscal year 1990-91. During prior years, oil overcharge moneys were the primary source of funds for the Division's programs. However, these moneys have now been totally depleted, except for four payments of Texaco oil overcharge funds which the Commonwealth expects to receive during the next six years.

The lack of oil overcharge moneys could hurt the WAP and LIHEAP as well. Prior funding for these programs consisted of federal grants and oil overcharge moneys. Without oil overcharge funds, 1991-92 funding for the WAP will be reduced by 65 percent from 1990-91 levels, assuming the program receives the same federal dollars as it did during the 1990-91 fiscal year. The Commonwealth's current budget provides no funding for the WAP during the second year of the biennium. Even with oil overcharge funding in 1990-91, LIHEAP ran out of funds to support its crisis component in February of 1990 and was forced to deny assistance to 2,100 households. The subcommittee was informed that unless additional state funding is provided to the WAP and LIHEAP for fiscal year 1991-92, it will be impossible for these programs to provide statewide coverage. Because of reduced funding in fiscal year 1990-91, the WAP has already ceased operations in Northern Virginia and the Shenandoah Valley.

B. The Coal Subcommittee

The Coal Subcommittee met in Abingdon on January 3, 1991, for purposes of reviewing the impact to date of Virginia's Coal Employment and Production Incentive

Tax Credit (Va. Code § 58.1-2626.1). Enacted by the 1986 Session of the General Assembly as a means of encouraging the state's utilities to purchase Virginia-mined coal, this gross receipts tax credit was expanded in 1989 to provide these utilities with a two dollar per ton credit in tax year 1990 for Virginia-mined coal purchased during 1989, and a three dollar per ton credit effective in tax years 1991 through 2000 for Virginia-mined coal purchased during the preceding year. Under current law, the credit will be unavailable for tax years beginning on and after January 1, 2001.

Detailed charts depicting 1988 and 1989 coal purchases by Virginia utilities were provided to the subcommittee by the Virginia Center for Coal and Energy Research (VCCER). VCCER's charts, copies of which are attached as Appendix B, show that in 1989, only 3.6 million of the 9.7 million tons of coal purchased by Virginia utilities had been mined in Virginia.

Testimony indicated that one of the major factors influencing the coal-purchasing decisions of utilities is the cost of transporting the coal from the mine to the power plant. While over 90 percent of coal purchased from Virginia mines is hauled by Norfolk Southern Railroad, CSX Railroad services four of the five major coal-burning power plants owned by Virginia Power. The subcommittee was informed that there is an additional cost incurred by the purchasing utility when coal must be transferred from one railroad company to another. This additional cost must be considered by a utility in determining from whom it will purchase coal. An analysis of the per ton cost of Virginia coal purchased by utilities in the Commonwealth during 1988 and 1989 appears to indicate that transportation costs are a major reason why Virginia coal costs these utilities more than coal mined in Kentucky or West Virginia.

With few exceptions, public comment favored retaining the tax credit. Numerous representatives of Virginia's coal and power industries explained that the tax credit had made Virginia-mined coal more competitive with coal mined in Kentucky and West Virginia. These representatives stated that without such a credit in place, Virginia coal's higher production and transportation costs would place the Commonwealth's coal companies at an extreme disadvantage, and electric power consumers in Virginia would face higher rates. Citing a recently conducted VCCER study, one coal company representative explained that "[t]he net benefits (i.e., coalfield and ratepayer benefits minus state revenue loss) are expected to exceed $8 million as the credit increases in the early 1990's."

Two coal company representatives voiced opposition to the credit, stating that since its enactment, Virginia's utilities have not significantly increased their purchases of Virginia-mined coal. However, they suggested that they would support a continuation of the tax credit if it were given directly to the coal producer, rather than to the purchasing utility.

IV. COMMISSION DELIBERATIONS

During 1990, the Virginia Coal and Energy Commission discussed a wide variety of issues, including how to prepare for the day when Virginia's coal production begins to irreversibly decline, what will be the impact of proposed amendments to the federal Clean Air Act on Virginia's coal and electric companies, the current state of the electrical transmission system in the Commonwealth and whether it would be feasible to "wheel" power from Southwest Virginia to the east, the current difficulties encountered by cogeneration/power projects in obtaining air permits for operations in the Commonwealth, and the future funding of various state energy programs. The

Commission also received an update on the status of regulations being developed under the new Virginia Gas and Oil Act.

A. Coal and the Future of Southwest Virginia

According to figures provided by DMME, coal production in the Commonwealth increased steadily during the 1980's. Only six of the nation's 23 coal-producing states now mine more coal annually than does Virginia. Underground mining, and in particular longwall mining, has been responsible for Virginia's rising production totals. In 1989, 10 longwall mines accounted for approximately 20 percent of Virginia's total coal production. Forty-four million tons of coal were produced by Virginia mining operations in 1989, and production during 1990 is expected to exceed 48 million tons. A chart depicting coal production totals for each of the last ten years is attached as Appendix C.

As coal production in the Commonwealth has grown, so have Virginia's coal exports. Virginia-mined coal accounted for 22% of the Commonwealth's exports during 1989. November, 1990 year-to-date Virginia coal export totals were up ten percent in comparison to the same time period during 1989, indicating that the future of Virginia coal's export markets is extremely promising.

However, while production and export totals are on the rise, there has been a dramatic decline in the number of coal mines operating in the Commonwealth. Earnings in Southwest Virginia have dropped by more than one-third from 1977 totals. Since the early 1980's, coal mining employment has declined from 22,000 to 12,500 and the region's total labor force has been reduced by 17,000 because of the lack of significant job growth in the coalfields. Yet, while wholesale and retail trade is the largest employer in the region, employing in excess of 12,600 individuals, wages earned by those individuals account for only 14 percent of the region's total wages, whereas coal mining still accounts for 36 percent of all wages earned in the coalfield area.

With well over one-third of Southwest Virginia's wage earners directly dependent on coal mining for their livelihood, the Commission focused its attention on the future of that industry in Virginia. DMME's Division of Mineral Resources, in cooperation with the United States Geological Survey, has embarked on a project to recompute the extent of the Commonwealth's coal reserves. Although the project will not be completed until the mid-1990's, Virginia's State Geologist provided the Commission with some preliminary estimates of the clean and recoverable coal reserves remaining in Southwest Virginia. In 1987, the United States Department of Energy (DOE) estimated these reserves at 1,609 million short tons. If depleted at today's rate of production, these reserves would be mined-out within the next 33 years. However, subsequent estimates published by VCCER indicate DOE's estimate was extremely conservative. VCCER's adjusted demonstrated reserve base estimate shows 2,046 million short tons of clean and recoverable coal with a static reserve base of 42 years, while the Center's estimate based on a survey of coal producers shows reserves of 2,160 million short tons with a static reserve index of 44 years.

The Commission was informed that while knowledge of Virginia's clean and recoverable coal reserves is important, the critical point in the Commonwealth's coal production curve will be when production begins to irreversibly decline. With the exception of Alabama, Eastern Kentucky, and Virginia, all other Appalachian states are years past their peak production days. Based on a detailed analysis of Virginia's production trends since 1900, Virginia's State Geologist informed the Commission that coal production in the Commonwealth will begin to irreversibly decline between 2000

and 2020. Variables such as advancements in mining technology and a greater demand for Virginia's low-sulfur coal could also influence the Commonwealth's coal production curve.

The State Geologist also predicted that employment, salaries and wages related to coal production in Southwest Virginia will continue to decline. He explained that once coal production begins to decline, the economic impact on Southwest Virginia will be devastating. Particularly hard-hit will be the three major coal-producing counties (Dickenson, Wise, and Buchanan). However, testimony indicated that the severity of this blow could be greatly reduced by diversifying the region's economy. The Virginia Coalfield Economic Development Authority, since its inception in 1988, has successfully attracted four new manufacturing companies to the area and has supported the expansion of four other existing industries. The Authority's efforts have resulted in the creation of 108 new jobs. According to its Director, the Authority's long-term strategy is to attract 10,000 new diversified jobs to the coalfield region during the 1990's.

Commission members were told that (i) completion of the highway system serving the coal fields and (ii) improving the quality of education offered in the area will be crucial to the future economy of Southwest Virginia. Tourism, "home-grown" industries, and the potential construction of cogeneration/power projects were touted as holding particular promise for the region's diversification efforts. However, testimony emphasized that coal must be allowed to support the region's economy until a meaningful diversification plan is implemented.

B. Proposed Amendments to the Clean Air Act

During August of 1990, the Commission attempted to determine the impact of proposed amendments to the federal Clean Air Act. At the time of the Commission's meeting, a congressional conference committee had just been formed to resolve the differences between House and Senate bills containing these amendments. The Commission received detailed briefings from coal and electric industry spokesmen on the provisions of each bill and the anticipated impacts of these provisions on these industries, electric ratepayers, and the Commonwealth as a whole.

As described to the Commission, both bills:

1. Set out a two-phase program designed to achieve a 10 million ton reduction in sulfur dioxide emissions from 1980 levels by capping utility emissions at 8.9 million tons per year;

2. Require all new utility units to obtain or purchase offsets for 100 percent of their new emissions in an effort to prevent emissions from exceeding the cap;

3. Allow utility units the freedom to choose their own system compliance strategy (i.e., type of technology, coal, etc.) and to trade emission offset credits;

4. Contain incentives to promote technology controls, renewable energy, and energy conservation;

5. Contain provisions designed to reduce the burdens imposed on small or clean utility systems, or to provide limited relief from the legislation's mandates in special circumstances; and

6. Specify that for states to have a federally approved permit program, they must collect a fee of not less than $25 per ton for each regulated pollutant (S02, NOx, Mercury, etc.) to be emitted, up to 4,000 tons per year. These fees are to be used to pay for the administrative costs of each state's program.

Testimony indicated that the proposed amendments would have a positive impact on the production of Virginia coal. Because this coal has a low sulfur content, experts predicted it should gain additional markets as a result of the legislation. Since the demand for such coal is expected to grow with passage of the legislation, its production and price should increase as well.

Electric industry spokesmen predicted that their companies' costs of complying with the proposed legislation will be extremely high (up to $100 billion annually nationwide). These costs are expected to be passed on to electricity consumers in the form of rate increases. Representatives of Appalachian Power Company (APCO) and Virginia Power predicted that customers in their service areas would see a rate increase of between five and 10 percent if the legislation passes.

The Commission was informed that the two bills under consideration contain significantly different provisions regarding units in progress, toxics, visibility protection, nonattainment/NOx controls, and when modifications to a plant will subject it to a new source licensing process, including possible review for best available control technology. After reviewing these differing provisions and their significance in terms of impact on the Commonwealth, the Commission determined that a letter should be sent to each member of Virginia's Congressional Delegation urging their support for certain provisions and providing them with the Commission's rationale as to why these provisions are preferable for the Commonwealth. A copy of the Commission's letter and position statement which were mailed to the Virginia Congressional Delegation is attached as Appendix D.

C. Electric Transmission Capacity and the Wheeling of Power

According to APCO and Virginia Power spokesmen, Virginia's electrical transmission system is complex and overburdened. Transmission had to be curtailed on 60 percent of the summer days in 1989, and on 50 percent of the summer days during 1990. The Commission was informed that as a result of transmission studies initiated in 1989, the two companies had agreed to build new transmission lines connecting their respective systems. The new lines are expected to create an additional 2,000 megawatts of transmission capacity and, providing no regulatory barriers are encountered, could be in place as early as 1998. APCO has agreed to commit 500 megawatts of this new capacity to nonutility generators which are successful in their bids with Virginia Power, while the remaining 1500 megawatts of new capacity will be used to service the growth of APCO's current customers.

The Commission was told that Virginia Power's solicitations for power from nonutility power generators have created great interest in Southwest Virginia and West Virginia. Wheeling power from nonutility generators in Southwest Virginia holds great industrial and economic development potential for the Virginia coalfield region. Information provided to the Commission suggests that this area could supply power generators with approximately 4.5 million tons of coal annually, which would support approximately 1,575 megawatts of generating capacity. According to a spokesman for the cogeneration industry, despite the tremendous economic development opportunities and favorable economies which would result from mine-mouth production, transmission access (wheeling) is the key to the creation of this industry in Southwest Virginia.

Testimony portrayed the transmission/wheeling issue as a "chicken and egg" problem. Without transmission access, nonutility generators are unable to commit to build generation units. On the other hand, no incentive exists for a utility to build more transmission lines in the absence of (i) an immediate need of its existing customers or (ii) assurances that the additional revenues will be forthcoming to service the carrying cost. Coal and cogeneration industry officials indicated a reluctance to support the construction of the new APCO/Virginia Power transmission line without an assurance that Southwest Virginia nonutility generators burning Virginia coal would be permitted to wheel power purchased by Virginia Power over the new line.

D. Cogeneration/Power Project Permitting Problems

The Commission received an update on cogeneration/power project air permit issues at its November 1990 meeting. While five of the these projects received air permits during the first 10 months of 1990, permitting delays of six to 12 months due to a backlog in processing are still being experienced by all other proposed projects. The Commission was told that these delays are costing project sponsors up to $300,000 per day.

Commission members were also informed that EPA Region III's attitude towards proposed cogeneration/power projects continues to be aggressive and hostile, requiring that unreasonable best available control technology be used which has yet to be commercially proven and which is unfeasible for use in Virginia. Recalling 1989 testimony about the differing regulatory attitudes of Region III and Region IV, the Commission determined that it would be in the Commonwealth's best interests if the administrative responsibilities over Virginia could be transferred from Region III to Region IV. Consequently, a letter from the Commission was sent to all members of Virginia's Congressional Delegation requesting their assistance in accomplishing this administrative transfer. A copy of one of these letters is attached as Appendix E.

E. Funding for State Energy Programs

At its November 1990 meeting, the Commission received a report from its Energy Preparedness Subcommittee concerning the future funding needs of the WAP and LIHEAP. While the WAP assists low income individuals with the weatherization of their dwellings, LIHEAP provides funds to the needy to pay for their fuel costs.

The Commission was informed that state funding for both programs had been provided for only the first year of the current biennium. Federal and state funding for the WAP during fiscal year 1990-91 totaled approximately eight million dollars, a two million dollar reduction from funding provided in fiscal year 1989-90. As a result of this reduction, the Program was forced to cease operations in Northern Virginia and the Shenandoah Valley. Federal funding of the program in fiscal year 1991-92 is predicted to be approximately three million dollars. The Subcommittee reported that unless state funds are appropriated to the WAP in the upcoming fiscal year, it will be impossible for the Program to provide statewide coverage. The Commission was informed that funding for the WAP was a "critical concern," as oil overcharge moneys used to fund the program in past years are no longer available.

During fiscal year 1989-90, LIHEAP received eight million dollars in state funding and $27 million in federal moneys. Even with this level of funding, the Program ran out of money to support its crisis component in February of 1990 because of increased demand for fuel assistance during the unusually cold previous two months. Fortunately, LIHEAP received an emergency federal grant of $595,000 which allowed the crisis component of the Program to continue throughout the remainder of the winter.

Commission members determined that the importance of these programs makes it imperative that they receive state funding assistance for fiscal year 1991-92. Therefore, the Commission forwarded a letter to the Governor recommending that (i) LIHEAP be provided with state funding during fiscal year 1991-92 at a level at least as high as in fiscal year 1990-91 so that the program may continue to provide statewide coverage and (ii) WAP be funded during fiscal year 1991-92 at a level sufficient to provide statewide coverage. A copy of this letter is attached as Appendix F.

F. Implementation of the Virginia Gas and Oil Act (1990)

At its final meeting prior to the 1991 Session of the General Assembly, the Commission reviewed the progress made to date in implementing Virginia's new Gas and Oil Act (Va. Code §§ 45.1-361.1 et seq.). Specifically, the Commission received updates on the actions taken by the newly established Virginia Gas and Oil Board and the development of permanent regulations under the Act by DMME.

Information provided by DMME personnel indicated that since its creation, the Virginia Gas and Oil Board had been extremely busy. During the final four months of 1990, the Board heard over 100 cases, nearly 80 percent of which involved coalbed methane wells. In those cases, the Board issued administrative rulings concerning notice, standing, and the right to stimulate as a condition for forced pooling. The Board also commented on the escrow provisions of the Act.

DMME officials told the Commission that because Virginia is the only state in the Appalachian region where coalbed methane is being developed in active coal seams, other states, including West Virginia, were watching closely to see how well the new Act is working. To date, 92 coalbed methane wells have been permitted in the Commonwealth and 63 wells have actually been drilled. DMME personnel informed Commission members that the Act appeared to be working well and recommended that no changes be made to it.

When the new Act became effective on July 1, 1990, DMME adopted an emergency regulation and made technical changes to an existing regulation which were necessary to implement the Act. No policy changes were effectuated by these regulations. In an effort to facilitate the development of permanent regulations under the Act, DMME established a working group composed of citizens, environmentalists, natural resource agency personnel, and representatives of the conventional oil and gas industry, the coalbed methane industry, and the coal industry. The group met numerous times over a four-month period and developed a number of recommendations concerning administrative, technical, permitting, and environmental standards to be included in the permanent regulations. DMME personnel explained that the recommendations of the working group were being reviewed and that the Department would be publishing proposed permanent regulations at the end of January, 1991. It was predicted that final regulations would be issued by July 1, 1991, when the emergency regulations would expire.

V. RECOMMENDATIONS

After reviewing the issues described earlier in this report, the Virginia Coal and Energy Commission made the following recommendations:

A. Recommendations to Virginia's Congressional Delegation

1. *That certain proposed amendments to the federal Clean Air Act relating to units in progress, toxics, visibility protection, non-attainment/NOx controls,*

and the WEPCO doctrine should be supported, opposed, or modified because of their potential impact upon Virginia's coal and electric industries, electric ratepayers, and the Commonwealth as a whole. A copy of the letter and position statement which were mailed to each member of the Delegation are attached as Appendix D.

2. *That EPA's regional administrative responsibilities over the Commonwealth should be shifted from EPA's Region III to Region IV so that Virginia might enjoy a more favorable regulatory climate.* A copy of the letter mailed to each member of the Delegation requesting their assistance in accomplishing this administrative responsibility transfer is attached as Appendix E.

B. Recommendations to the Governor

1. *That the low Income Housing Energy Assistance Program, to ensure continued statewide coverage, should be provided with at least the same level of state funding for fiscal year 1991-92 as it received during fiscal year 1990-91.*

2. *That the Weatherization Assistance Program should be provided with state funding for fiscal year 1991-92 at a level which is sufficient to allow the program to achieve statewide coverage.*

A copy of the Commission's letter to the Governor encompassing both of these recommendations is attached as Appendix F.

Respectfully submitted,

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VI. APPENDIX GUIDE

COMMONWEALTH OF VIRGINIA
REPORT ON USES OF OIL OVERCHARGE FUNDS
1989-90

Overview of Activities

Virginia used Exxon funds to continue its core energy programs. Low Income Home Energy Assistance Program (LIHEAP), Weatherization Assistance Program (WAP), State Energy Conservation Program (SECP), Energy Extension Service (EES) and the Institutional Conservation Program (ICP), at or near their 1985-86 levels and to fund certain key projects that promise large energy savings. The first two programs, LIHEAP and WAP, are administered by the Department of Social Services, the other three by the Department of Mines, Minerals and Energy.

To date, eight projects were funded from the Stripper Well case; a description of each project is included in this report. Diamond Shamrock funds were spent for administrative support of the SECP, EES and ICP programs.

Funding levels for the core programs are shown in the table below.

Program	FY 1989-90
Funding Level/Source	
LIHEAP	
Federal	$27,222,229
Exxon	8,587,327
WAP	
Federal	2,777,079
Exxon	7,300,257
SECP	
Federal	198,300
Exxon	696,512.46
Diamond Shamrock	49,930.14
EES	
Federal	81,500
Exxon	301,983.18
Diamond Shamrock	33,050.99
ICP	
Federal	98,253
Exxon	1,200,000
Diamond Shamrock	338,354.03

These programs are operated under the federal guidelines set out of each program.

Descriptions of Programs

Programs of the Department of Social Services

Low Income Home Energy Assistance Program (LIHEAP)

The Low Income Home Energy Assistance Program is run by the Department of Social Services (DSS) and provides assistance to eligible households to offset the costs of home energy that are excessive in relation to household income. Eligibility for the program is based on the applicant's income which must be less than 150% of the national poverty figures. Eligibility is also based on family size, and the geographic area of the state. During FY 1989-90, 121,161 households received assistance. The average grant for fuel assistance was $269.00. Also during FY 1989-90, 55 local agencies operated cooling programs. The program provides for repair, installation, rental or purchase of a fan/air conditioner and payment of an electric bill. To receive financial assistance for cooling, the applicant must be medically in need of cooling as verified by a physician. A total of 2,373 applicants were assisted. The average assistance was $244.00 per applicant receiving aid.

Weatherization Assistance Program (WAP)

The Weatherization Assistance Program provides weatherization services including air infiltration measures and insulation to the homes of low income and elderly persons. In Virginia, the program is provided to individuals and families with income levels at or below the 125% poverty guideline. During FY 1989-90, 5,287 homes were weatherized (caulked, insulated, weatherstripped, etc.) at an average cost of $1,550.00 for materials and labor. The State maximum allowable was $1,600.00 per home. During FY 1989-90, 74% of the homes were owner occupied, and 26% were rental occupied. The estimated energy savings per weatherized household per year is $110 to $175. These savings will continue for a number of years.

The Weatherization Program is implemented and monitored through 30 local non-profit agencies. At least 10% of the weatherization units per local unit are monitored for completeness by a State Field Auditor.

Programs of the Department of Mines, Minerals & Energy's, Division of Energy (VDOE)

SECP/EES and ICP programs are administered by the Department of Mines, Minerals & Energy's, Division of Energy (DMME). The SECP (State Energy Conservation Program) provides broadly defined consumer conservation services. The EES (Energy Extension Service) is more sharply focused on individual consumers, small businesses and local governments. The ICP Institutional Conservation Program) provides energy audits, technical assistance and energy-saving capital improvements to schools and hospitals. Major activities for FY 1989-90 are as follows:

Institutional Conservation Program (ICP)

During FY 1989-90, the ICP made Technical Assistance (TA) grants of $59,341 to 2 schools covering a total of 12 buildings. Energy Conservation Measure (ECM) grants were awarded to 19 institutions (17 schools and 2 hospitals) for a total award of $1,247,228. Participating institutions provided local matching funds of $723,049 for their projects in 29 buildings statewide.

Local Government Program (SECP/EES)

VDOE's local government programs are offered on a competitive basis and included $536,361 for FY 1989-90 in contract funds. Specific programs were:

- Solid Waste Resource Recovery/Recycling — 16 studies
  — 21 demonstrations
- Energy Conservation for Public Buildings — 9 buildings
- Innovative Energy Projects - 2 projects

Overall 48 projects involving 75 jurisdictions were funded. The $536,361 expended by VDOE was matched by $484,861 from the participating local governments. Energy and cost savings have not been estimated at this time.

Community Outreach Program (SECP)

The Community Outreach Program, co-sponsored with the Virginia Polytechnic Institute and State University's Cooperative Extension Service, presented 72 programs throughout Virginia to educate consumers about energy resources and conservation. A total of 5,207 individuals attended the programs in 36 localities.

Workshops (SECP)

Two workshops were held to educate home builders on energy efficient home building techniques and design. Participants evaluation of each workshop was above average.

Used Oil Recycling Program (SECP)

VDOE maintains a program of 434 centers statewide to collect used motor oil from the public. In 1989, over 450,000 gallons of used oil were recycled directly due to the program. This represents a 46% increase from 1988-89. Used oil is processed for use with No. 5 and No. 6 oil for industrial and heating purposes. Each gallon of used oil collected represents 150,000 btu's in fuel savings that translates into a total annual energy savings for the program of 68 billion btu's.

In 1989, the General Assembly provided additional Exxon funds to maintain and expand the program of voluntary collection centers statewide. The General Assembly also enacted legislation that requires all outlets selling motor oil to either take back used oil or post a sign letting their customers know where they can safely dispose of used oil.

Statewide Traffic Signal Retiming Project (SECP)

A total of $3.8 million in Exxon funds is being used to retime all traffic signals in Virginia. The multi-year project began in 1988 and will continue through 1991. Retiming will be done on all the state's signals (about 3,100). To date, the project is 50% complete. The project will save an estimated 63 million gallons of motor fuel annually once completed with a payback of two weeks.

Northern Virginia Traffic Signal Study (SECP)

$1.5 million in Exxon funds are being used for preliminary engineering of a computerized traffic signal system in Northern Virginia. The system design will provide more efficient traffic control, decreased travel time and reduce fuel consumption to the motoring public. The project will involve over 500 signals to be completed in 1991. The project is over 30% complete. At completion, 350,000 gallons of fuel will be saved annually.

State Energy Conservation Team (EES)

The State Energy Management Team was funded with $166,284 in Stripper monies. In addition to reviewing funding requests for energy projects at state facilities, the team performs approximately 2 on-site visits a month, providing advice and training to the facility managers. Energy consumption data for state owned facilities is also collected for analysis and comparison purposes. The State Energy Team administered an electrical and general energy use conservation study on the 300,000 square foot state government complex, the main intent being a reduction in energy consumption, with special emphasis on reduction in peak demand.

STRIPPER WELL PROJECTS

Mr. O. Gene Dishner, Director of the Department of Mines, Minerals and Energy, is the Governor's designee for submitting program plans and reports. Below is a list of approved projects being implemented.

Photovoltaics for Utility Scale Application (PVUSA)

The Department of Mines, Minerals & Energy's, Division of Energy has contracted with Virginia Power to conduct a demonstration project at its North Anna Plant. It is part of a national network of photovoltaic test sites, and will assess the durability, solar efficiency, and power conditioning of a thin film solar cell technology. The panels are being manufactured and will be installed at the North Anna Plant in the spring of 1991. Results from this demonstration project will indicate successful applications for renewable solar energy and may suggest additional markets for thin-film technologies. The project began in 1989 and will continue for two years. Project cost is $200,000.

Transit Connection Marketing Project

The Northern Virginia Transportation Commission, in cooperation with its five member jurisdictions, the Washington Metropolitan Area Transit Authority, and the Metropolitan Washington Council of Governments will initiate a "connections" marketing campaign. The purpose of the "connections" campaign is to increase public transportation ridership in Northern Virginia by making it easier for passengers to complete their trips using one or more transit system(s). This will be accomplished by improving public information, reducing the price of traveling by public transit where transfer between systems is required, and making transit use more convenient. This project will benefit all Northern Virginia commuters and save energy by reducing the number of vehicles on the road. Stripper Well funds ($33,333) are being used for this project, which began in April 1990 and will continue for one year.

Dulles Area Transportation Association

This project will provide funds to the Dulles Area Transportation Association and other Northern Virginia Transportation Management Associations. The funds will be used to support planning efforts to reduce traffic generation and mitigate traffic congestion in the Northern Virginia area in general and the Dulles/Route 28 corridor in particular by supporting programs which promote ride-sharing, bus transit, vans and van pools, and transportation planning. The project began in April 1990 and will run for one year. Project cost is $75,000.

Mass Transit Capital Projects

The Mass Transit Capital Projects will be funded with $1,748,763 of Texaco monies. The program is being administered by the Virginia Department of Transportation (VDOT). This project will provide financial assistance to local public bodies that operate public transportation services. The funds will be used by the local transit companies to purchase equipment and/or make improvements to facilities that support transit operations. Energy savings will be realized through the replacement of older, less reliable equipment with newer models and by increasing the safety, reliability and attractiveness of public transportation services in Virginia, thereby, encouraging more people to use public transportation. This project began in April 1990 and will continue for two years.

Human Service Transportation Project

A portion of the Texaco funds ($868,237) is being used for the Human Service Transportation Project. This program will be administered by the Interagency Coordinating Council for the Transportation Disadvantaged within the Virginia Department of Transportation (VDOT). The project will provide vehicles to local government and private non-profit human service agencies.

These vehicles will be used to transport clients to and from services. Energy savings will be realized because older vehicles will be replaced with newer, more fuel efficient equipment. In addition, the vehicle types provided will be carefully matched to an agency's client needs and routes and schedules will be planned to minimize the number of vehicle miles traveled. Agencies and vehicles were selected and recommended for funding in FY 90. This project began in December 1989 and will continue through March 1991.

Low and Moderate Income Housing Energy-Saving Improvement Program

This program is a part of a state funded housing initiative known as the Virginia Housing Partnership Fund. A total of $20 million in Stripper Well monies was allocated to this project in FY-89. No additional allocation was made for FY-90. The program is administered by the Virginia Department of Housing and Community Development and uses the Stripper Well funds to assist low and moderate income families in making energy related improvements to their homes. Oil Overcharge funds are provided in the form of a grant which is normally accompanied by a loan made from state funds. The grants are subject to repayment if the recipient violates any of the terms of the grant agreement during the eight year compliance period. The program began in March of 1989 and will operate through FY 1998. Over $16 million allocated under the state's low income housing initiative, which, when combined with state loan funds, will result in rehabilitation and energy improvements to over 3,000 low income housing units. The balance available will be carried over into the FY-91 Partnership funding cycle.

Technical Assessment of Coal Burning Efficiency

The Department of Mines, Minerals and Energy, Division of Energy is conducting a Clean Coal Technology Assessment. The project began in 1989 and will continue for two years. The cost of the project is $200,000. The utilization of these technologies has been very limited, thus far, in industrial, utility and institutional applications in Virginia. Hence, the purpose of this study is to: (1) define those technologies that have the highest potential for commercialization in Virginia, (2) identify specific potential end-users of these technologies, (3) define the barriers and constraints to technology deployment, and, (4) develop strategies for overcoming the barriers and constraints identified. Technology and information transfer activities are an integral part of our project. Item (1) has been completed and a copy of the Executive Summary of that report will be forwarded to you this fall. The services of a consultant for completion of items (2) through (4) are currently under review.

Coal-Derived Diesel Fuel

Work on this project began in the winter of 1988, and its objective is to produce a coal-derived diesel fuel suitable for several kinds of diesel engines including those of locomotives. The project has several sources of funding including the U.S. Department of Energy and private enterprise. The project has had some delays, however, 6,000 gallons of Loco D-2 fuel will be delivered by November 15, 1990 to the Southwest Research Institute. The 500 hour stationary engine test will take another two months to complete. The last objective of this project is to complete a demonstration run of a train using this fuel from Southwest Virginia to Tidewater Virginia. This project has been extended through January 15, 1991.

Key Accomplishments

Virginia is using oil overcharge monies primarily: to support its core energy conservation and benefits programs, to support research and development programs of exceptional promise, and to help low to moderate income families make energy-related home improvements.

In summary, during FY 1989-90:

- Over 5,200 residences were weatherized with savings up to 206 gallons of fuel oil saved per home. (WAP)

- Completed an electrical and general energy use conservation study on the 3,000,000 square foot state government complex. The main intent being a reduction in energy consumption, with special emphasis on the reduction of peak demand. (EES)

- There are 434 centers statewide that collect used motor oil from the public. In 1989, over 450,000 gallons of used oil were recycled directly due to the program (a 46% increase from 1988) representing a total annual energy savings of 68 billion btu's.

- The 2-year traffic signal program will reset 3,100 traffic lights in the state with the cost of the program repaid in about two weeks. (SECP)

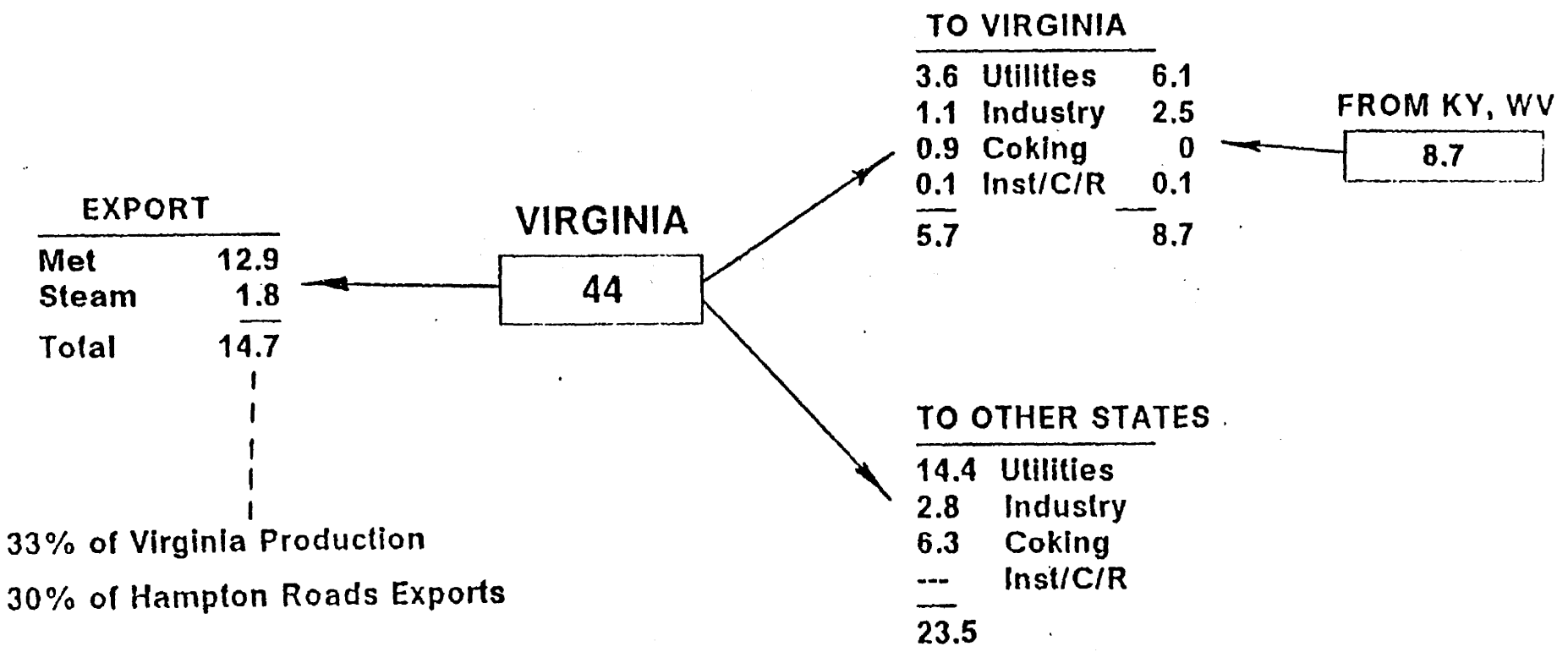
- Over $16 million allocated under the state's low income housing initiative, which, when combined with state loan funds, will result in rehabilitation and energy improvements to over 3,000 low income housing units.

- Innovative services, training opportunities, and educational programs were offered to local governments, trade groups, and individual consumers to cut costs and save energy and to help protect the natural environment. (SECP/EES)

- Astro-Power has been selected to be the manufacturer of the photovoltaic modules for the PVUSA project. Installation will begin this spring.

- In the technology evaluation of the CCTs Study, 24 technologies were identified as having a high potential for commercialization in Virginia.

Figure C8: Distribution of Virginia Coal



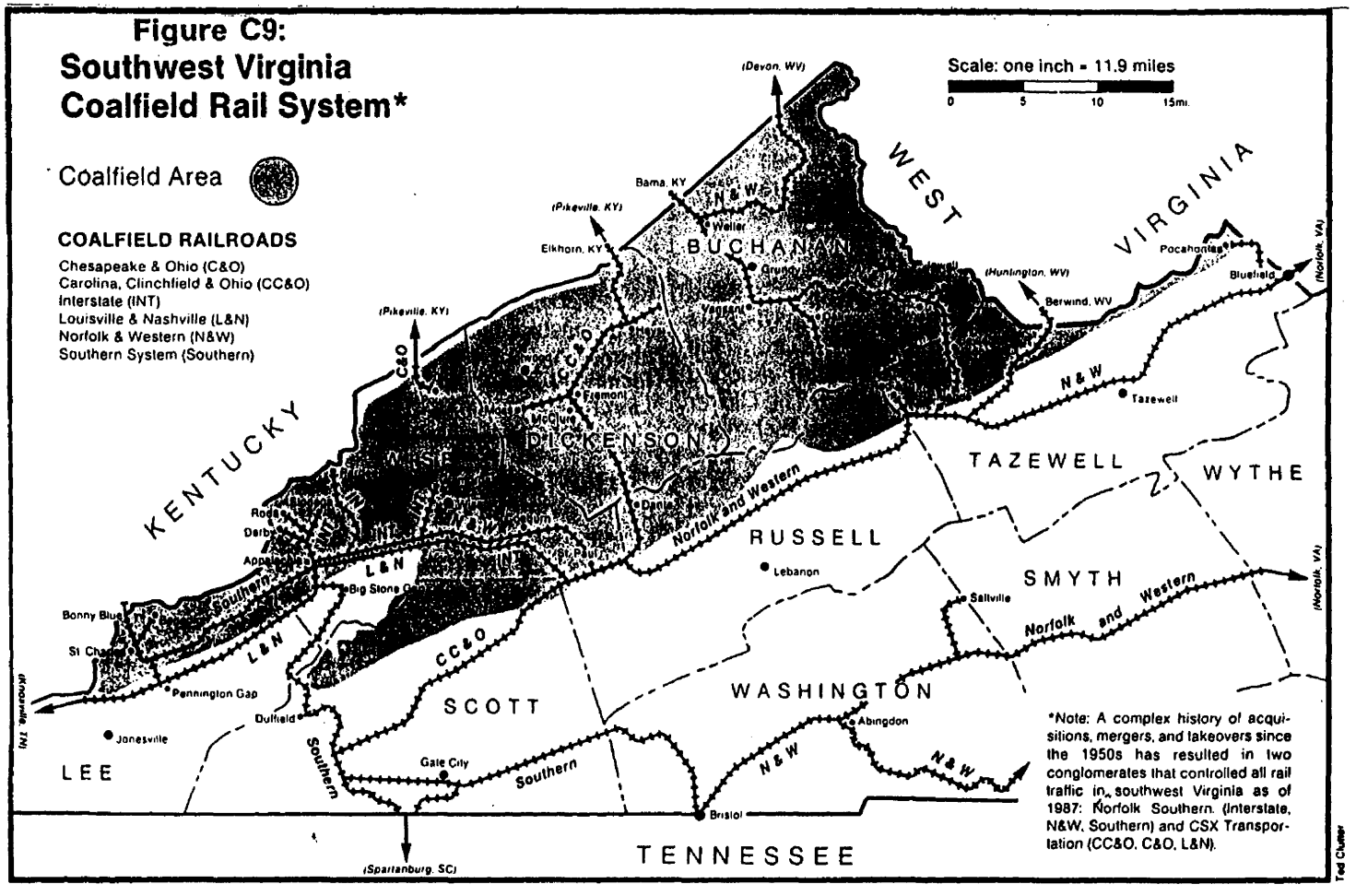


Figure C9:
Southwest Virginia
Coalfield Rail System*
Coalfield Area
COALFIELD RAILROADS
Chesapeake & Ohio (C&O)
Carolina, Clinchfield & Ohio (CC&O)
Interstate (INT)
Louisville & Nashville (L&N)
Norfolk & Western (N&W)
Southern System (Southern)
Scale: one inch = 11.9 miles
0 5 10 15mi.
KENTUCKY
WEST VIRGINIA
TENNESSEE
BUCHANAN
DICKENSON
RUSSELL
TAZEWELL
WYTHE
SMYTH
WASHINGTON
SCOTT
LEE
(Devon, WV)
(Pikeville, KY)
Bama, KY
Elkhorn, KY
Weller
Grundy
Vansant
Fremont
McClure
Dante
Rodes
Darby
Appalachia
St. Paul
Big Stone Gap
Bonny Blue
St Charles
Pennington Gap
Dulfield
Jonesville
Gate City
Lebanon
Sallville
Abingdon
Bristol
Tazewell
Berwind, WV
(Huntington, WV)
Pocahontas
Bluefield
(Norfolk, VA)
(Knoxville, TN)
(Spartanburg, SC)
C&O
CC&O
L&N
N&W
Southern
Norfolk and Western
INT
*Note: A complex history of acquisitions, mergers, and takeovers since the 1950s has resulted in two conglomerates that controlled all rail traffic in southwest Virginia as of 1987: Norfolk Southern (Interstate, N&W, Southern) and CSX Transportation (CC&O, C&O, L&N).
Ted Clutter

Figure C10: Principal Coal Hauling Rail Routes
Source: Virginia Department of Highways and Transportation 1985

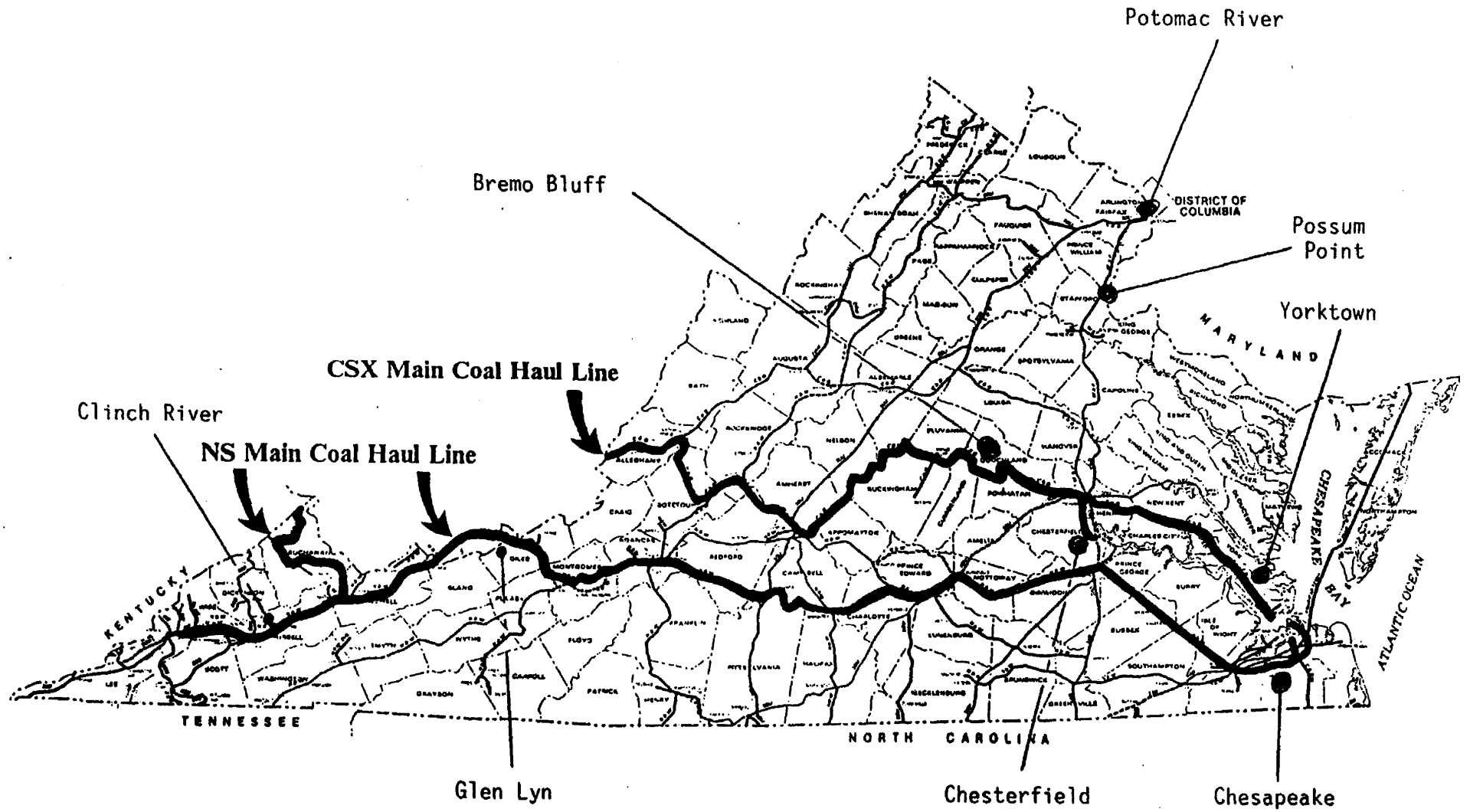


TABLE 1: VIRGINIA POWER COAL DELIVERIES, 1979-1989

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
% KY	79	66	70	65	48	65	59	47	45	39	50
% WV	19	17	17	20	36	15	20	33	32	32	31
% VA	2	17	13	15	20	20	20	20	23	29	18
Total 10^3 Tons	1812	1873	3242	3782	4194	5128	4119	4793	6200	5047	6424
VA 10^3 Tons	43	312	436	578	846	1008	835	965	1400	1467	1188

* w/o credit, projected in 1986, see text
Data Sources: NCA (1988a), Randolph and Hibbard (1987), US.EIA

Table C25. Virginia Power Plant Deliveries by Origin, 1988-1989

Utility Power Plant	Primary Railroad	1988 1000 tons	1988 % VA	1988 %KY	1988 %WV	1989 1000 tons	1989 % VA	1989 %KY	1989 % WV
Virginia Power		5,047	29	39	32	6,424	18	50	31
Bremo Bluff	CSX	387	0	41	59	538	0	79	21
Chesterfield	CSX	2,286	14	36	49	2,861	4	59	36
Cheasapeake	NS	1,270	72	14	14	1,517	59	11	30
Possum Point	CSX	538	28	61	10	774	5	75	20
Yorktown	CSX	566	14	82	4	734	19	49	21
Appalachian Power		1,542	93	0	7	2,191	87	2	11
Clinch River	NS	1,234	99	0	1	1,622	94	2	4
Glen Lyn	NS	308	69	0	31	569	66	4	30
Potomac Electric		869	51	7	42	1,124	46	24	30
Potomac River	NS								
Virginia Total		7,459	45	27	28	9,737	37	36	27

Source: U.S. EIA. 1989, 1990, *Cost and Quality of Fuels to Electric Utility Plants*.

Table C26a. Coal Delivered to Virginia Power Plants, Origin, Quality and Price, 1988 & 1989

Utility	State of Origin	1988 Quantity (1000 Tons)	Avg. Btu/Lb.	Avg. % S	Avg. %Ash	Avg. $/T
Virginia Power	Total	5,047	12,824	0.98	8.7	39.38
	KY	1,961	12,806	1.08	8.3	39.01
	VA	1,467	12,951	1.08	8.7	40.08
	WV	1,610	12,729	0.76	9.3	39.19
APCO	Total	1,543	12,697	0.77	11.7	37.62
	KY	0	-	-	-	-
	VA	1,430	12,677	0.77	12.0	38.17
	WV	112	12,918	0.80	8.7	30.68
PEPCO	Total	869	12,840	0.77	8.4	45.22
	KY	61	12,704	0.69	8.5	43.92
	VA	447	12,912	0.81	8.0	46.91
	WV	362	12,774	0.73	8.8	43.31
Virginia	Total	7,459	12,799	0.91	8.9	39.70
	KY	2,022	12,422	1.07	8.3	39.15
	VA	3,344	12,830	0.91	10.0	40.18
	WV	2,093	12,747	0.76	7.8	39.44

Table C26b. Delivered to Virginia Power Plants, 1989 Origin, Quality and Price

Utility	State of Origin	1989 Quantity (1000 Tons)	Avg. Btu/Lb.	Avg. % S	Avg. %Ash	Avg. $/T
Virginia Power	Total	6,424	12,708	1.02	8.94	38.96
	KY	3,230	12,661	1.04	8.59	39.10
	VA	1,188	12,896	1.13	8.99	40.76
	WV	2,006	12,675	0.91	9.49	37.68
APCO	Total	2,189	12,607	0.78	11.57	36.11
	KY	50	12,757	0.80	9.65	33.75
	VA	1,892	12,597	0.78	12.02	37.03
	WV	247	12,661	0.76	8.56	29.56
PEPCO	Total	1,124	12,769	0.77	8.08	35.25
	KY	273	12,758	0.75	7.79	46.32
	VA	520	12,827	0.84	7.97	48.92
	WV	331	12,688	0.74	8.49	46.5
Virginia	Total	9,737	12,693	0.94	9.43	39.32
	KY	3,553	12,670	1.01	8.54	39.58
	VA	3,600	12,729	0.90	10.43	39.98
	WV	2,584	12,675	0.87	9.27	38.03

Source: U.S. EIA., 1989, 1990. Cost and Quality of Fuels to Electric Utility Plants.

Table C27a. Origin of Coal Delivered To Virginia Power Plants

1988

Utility	Power Plant Coal Origin	Quantity (1000 Tons)	Avg. Btu/Lb.	Avg. % S	Avg. %Ash	Avg. $/T
Virginia Power	**Total**	**5,047**	**12,823**	**0.98**	**8.74**	**39.38**
	Bremo Bluff	387	12,706	0.88	9.43	41.21
	KY	158	12,780	1.05	9.55	38.53
	WV	229	12,655	0.77	9.34	43.06
	Chesterfield	2,286	12,758	0.91	8.97	38.49
	KY	834	12,711	1.09	8.63	37.62
	VA	322	12,952	1.05	8.31	40.01
	WV	1,130	12,738	0.74	9.40	38.69
	Chesapeake	1,270	12,940	1.04	8.70	39.69
	KY	174	12,905	0.96	8.15	38.64
	VA	912	12,986	1.10	8.76	40.26
	WV	184	12,746	0.85	8.90	37.89
	Possum Point	538	12,683	0.84	8.52	38.77
	KY	330	12,721	0.82	8.11	38.96
	VA	153	12,608	0.88	9.21	38.49
	WV	55	12,665	0.80	9.03	38.37
	Yorktown	566	13,037	1.32	7.66	41.61
	KY	465	13,009	1.31	7.49	41.82
	VA	80	13,199	1.41	8.05	41.39
	WV	21	13,065	1.12	9.83	37.74
APCo	**Total**	**1,542**	**12,697**	**0.77**	**11.72**	**37.63**
	Clinch River	1,234	12,634	0.75	12.22	36.13
	VA	1,218	12,636	0.75	12.26	36.25
	WV	16	12,526	0.84	9.10	27.16
	Glen Lyn	307	12,948	0.84	9.74	43.62
	VA	212	12,932	0.86	10.23	49.18
	WV	95	12,985	0.79	8.66	31.28
PEPCO	**Total**	**869**	**12,839**	**0.77**	**8.35**	**45.20**
	Potomac River	869	12,839	0.77	8.35	45.20
	KY	60	12,704	0.69	8.51	43.92
	VA	446	12,912	0.81	7.96	46.91
	WV	362	12,774	0.73	8.80	43.31
Virginia Total		**362**	**12,774**	**0.73**	**8.80**	**43.31**

Source: U.S. EIA.

Table C27b. Coal Delivered to Virginia Power Plants By Power Plant

1989

Utility	Power Plant/ Coal Origin	Quantity (1000 Tons)	Avg. Btu/Lb.	Avg. % S	Avg. %Ash	Avg. $/T
Virginia Power	**Total**	**6,424**	**12,726**	**1.03**	**8.96**	**39.11**
	Bremo Bluff	539	12,769	1.05	9.36	39.74
	KY	425	12,772	1.09	9.52	39.62
	WV	114	12,759	0.88	8.75	40.20
	Chesterfield	2,860	12,614	0.94	8.88	38.19
	KY	1,700	12,613	1.01	8.59	38.55
	VA	120	12,691	1.12	9.23	42.17
	WV	1,040	12,609	0.80	9.30	37.14
	Chesapeake	1,517	12,858	1.05	9.11	39.71
	KY	165	12,805	0.91	8.05	40.59
	VA	897	12,954	1.11	8.87	40.59
	WV	455	12,688	0.97	9.97	37.67
	Possum Point	774	12,557	0.98	9.04	39.26
	KY	579	12,572	1.02	8.50	39.33
	VA	35	12,755	0.76	9.22	41.26
	WV	160	12,464	0.86	10.97	38.55
	Yorktown	734	12,880	1.29	8.48	39.55
	KY	361	12,832	1.24	7.93	40.03
	VA	136	12,732	1.37	9.53	40.53
	WV	237	13,038	1.31	8.72	38.26
APCo	**Total**	**2,189**	**12,607**	**0.77**	**11.58**	**36.11**
	Clinch River	1,621	12,550	0.76	12.36	34.13
	KY	29	12,626	0.77	9.88	32.09
	VA	1,518	12,553	0.76	12.58	34.51
	WV	74	12,460	0.79	8.86	27.13
	Glen Lyn	568	12,771	0.81	9.35	41.76
	KY	21	12,938	0.85	9.34	36.05
	VA	374	12,774	0.84	9.77	47.24
	WV	173	12,747	0.75	8.43	30.60
PEPCO	**Total**	**1,124**	**12,769**	**0.79**	**8.08**	**47.58**
	Potomac River	1,124	12,769	0.79	8.08	47.58
	KY	273	12,758	0.75	7.79	46.32
	VA	520	12,827	0.84	7.97	48.92
	WV	331	12,688	0.74	8.49	46.50
Virginia Total		**9,737**	**12,702**	**0.94**	**9.51**	**39.45**

Source: U.S. EIA.

Table C15. Utility Deliveries of Virginia coal 1988 and 1989

1988

State of Destination	Quality 1000 T	Avg Btu/Lb	Avg % S	Lb-SO_2/MMBtu	Avg % Ash	Price $/T
North Carolina	4,065	12,743	1.00	1.57	10.8	43.08
Georgia	3,690	12,929	1.30	2.01	9.7	42.59
Virginia	3,344	12,830	0.91	1.42	10.0	40.23
Massachusetts	1,976	13,145	1.17	1.78	7.8	42.85
Tennessee	1,264	13,249	1.54	2.32	7.9	33.35
Florida	1,040	12,695	0.71	1.12	8.8	53.71
South Carolina	930	13,223	1.40	2.12	9.1	41.49
New Jersey	888	13,716	0.83	1.21	5.9	47.29
Michigan	578	13,402	1.24	1.85	7.0	45.95
Indiana	175	13,808	0.73	1.06	6.7	44.99
Mississippi	64	13,458	0.71	1.06	6.5	44.86
Alabama	40	13,146	1.63	2.48	8.5	38.07
New Hampshire	10	12,993	1.10	1.69	8.3	51.63
Wisconsin	7	13,997	0.76	1.09	4.6	50.63
Total	**18,071**	**12,982**	**1.10**	**1.69**	**9.3**	**42.59**

1989

State of Destination	Quantity 1000T	Avg Btu/Lb	Avg % S	Lb-SO_2/MMBtu	Avg % Ash	Price $/T
North Carolina	4,283	12,700	1.02	1.61	10.7	43.61
Virginia	3,601	12,729	0.90	1.41	10.4	39.92
Georgia	3,277	12,836	1.40	2.18	10.0	44.06
Massachusetts	1,756	13,032	1.19	1.83	7.5	42.37
Tennessee	1,276	12,951	1.87	2.90	9.0	32.06
New Jersey	1,122	13,878	0.85	1.22	5.3	47.94
South Carolina	1,047	13,074	1.30	1.99	9.1	41.00
Florida	838	12,498	0.72	1.15	9.0	58.18
Michigan	598	13,319	1.22	1.83	7.3	46.93
Delaware	76	13,234	0.87	1.31	8.0	52.95
Wisconsin	45	13,926	0.79	1.13	4.1	45.74
New Hampshire	42	14,013	1.20	1.71	5.3	60.79
Ohio	33	13,012	1.37	2.11	7.9	47.86
Illinois	6	13,169	0.77	1.17	6.0	48.82
Total	**18,000**	**12,896**	**1.14**	**1.77**	**9.4**	**43.01**

Table C16. Sulfur Content of Utility Deliveries of Virginia Coal, 1988-1989

% Sulfur	Lbs SO_2/10^6 Btu	% 1988 Deliveries	% 1989 Deliveries	States
0.70 - 0.80	<1.2	7%	5%	FL,IN,MS, WS,IL
0.81 - 0.95	1.21 - 1.50	24%	27%	VA, NJ, DE
0.96 - 1.10	1.51 - 1.75	23%	24%	NC,NH
1.11 - 1.25	1.76 - 2.00	14%	13%	MA,MI
1.26 - 1.65	2.00 - 2.50	33%	24%	GA,TN,AL
1.65 - 1.90	>2.50	-	7%	TN

Source: Table C15.

VIRGINIA COAL PRODUCTION

TABLE 1

YEAR	TOTAL TONNAGE	TOTAL NUMBER OF MINES
1981	41,977,807	881
1982	40,481,288	828
1983	35,506,056	626
1984	41,424,753	741
1985	42,376,484	681
1986	41,768,142	657
1987	45,537,960	606
1988	46,364,647	545
1989	43,855,230	509
1990	23,596,492 *	453 **

TABLE 2

YEAR	SURFACE		UNDERGROUND	
	TONNAGE	NO. OF MINES	TONNAGE	NO. OF MINES/ LONGWALL
1981	8,485,899	315	33,491,908	566
1982	8,342,714	252	32,138,574	576
1983	7,577,392	179	27,928,664	447
1984	7,309,271	208	34,115,482	533
1985	7,108,479	201	35,268,005	480
1986	7,101,684	196	34,666,458	461 / 11
1987	7,414,492	194	38,123,468	412 / 11
1988	7,942,639	172	38,422,008	373 / 10
1989	6,963,145	152	36,892,085	357 / 12
1990	3,581,524 *	128 **	20,014,968 *	325 **

* through June

** as of September 1

COMMONWEALTH of VIRGINIA

COAL AND ENERGY COMMISSION
General Assembly Building

910 CAPITOL STREET
SECOND FLOOR
RICHMOND, VIRGINIA 23219

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

September 18, 1990

The Honorable John Warner
The United States Senate
225 Russell Senate Office Bldg.
Washington, D.C. 20510

RE: Clean Air Act Amendments

Dear Senator Warner:

On behalf of the Virginia Coal and Energy Commission, I am writing you to share the Commission's concerns about the Clean Air Act Amendments of 1990, particularly as they relate to future energy production and the use of coal in the Commonwealth.

Attached to this letter is a brief "Position Paper" which explains our position on five critical issues remaining to be resolved by the House/Senate Conference Committee. The critical issues and positions taken thereon by the Commission are as follows:

- Units In Progress - The Commission endorses the approach espoused in the House version. This approach gives units in progress, such as the Clover Power Plant, adequate and permanent allowances.

- Air Toxics- The Commission recommends adoption of the House air toxics provisions as they pertain to the electric utility industry.

- Visibility Protection - The Commission encourages support for the Senate provisions which relate to the regulation of regional haze in federal lands. We oppose the provisions in the House bill which authorize the Federal Land Manager to stop a permit from being issued.

- Non-Attainment/NOx Controls - The Commission recommends adoption of the House non-attainment provisions which delineate Northern Virginia, and not the entire Commonwealth, as an ozone transport region. However, Section 182 (f) should be deleted from the House version.

- WEPCO - The Commission urges acceptance of the House language, with modifications similar to that proposed by the Department of Energy, which protects utilities installing pollution control projects from the stringent new source performance standards and prevention of significant deterioration rules.

Making the changes recommended above would significantly reduce the cost of compliance for Virginia's utilities and remove potential obstacles to the use of Virginia coal as a preferred energy source without compromising the environmental goals set forth in the legislation.

As always, we appreciate your attention to our concerns. If you have any questions regarding the Commissions's position on these or other matters, please feel free to call.

Sincerely,

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

cc: The Honorable John Warner
The Honorable Charles S. Robb
The Honorable Herbert H. Bateman
The Honorable Owen B. Picket
The Honorable Thomas J. Bliley, Jr.
The Honorable Norman Sisisky
The Honorable L.F. Payne, Jr.
The Honorable James Randolph Olin
The Honorable D. French Slaughter, Jr.
The Honorable Stanford E. Parris
The Honorable Frederick C. Boucher
The Honorable Frank Wolf

1990 CLEAN AIR ACT AMENDMENTS

POSITION PAPER
OF
THE VIRGINIA COAL AND ENERGY COMMISSION

- **UNITS IN PROGRESS**

The Commission recommends supporting the House provisions which grandfather units in progress such as the Clover Project. Both the House and Senate versions recognize the inequity in the initial treatment of units in progress and provide some degree of relief. However, the House version is preferable for the following reasons: (i) the allocation of allowances in the House bill is closer to the actual operating requirements of units in progress; (ii) the treatment is precise (i.e. there is no room for additional interpretation of the law by regulatory agencies or utilities); and (iii) the House allowances do not expire.

The joint Old Dominion Electric Cooperative -- Virginia Power Clover Project, which is scheduled to come on line in 1993 and 1994, is among those units specifically listed in the House bill to receive a sulfur dioxide emissions allowance. No sulfur dioxide emissions allowances are available to Old Dominion within their system since they own no coal generation. Any allowances available would have to be purchased at an estimated annual cost of $6 million to Old Dominion's consumers.

The $1.2 billion Clover Project in Halifax County, Virginia will utilize over $300 million in state-of-the-art pollution control equipment, allowing it to be one of the cleanest plants of its type in the nation. The additional cost of purchasing sulfur dioxide emissions allowances would amount to a double tax on Virginia rate payers.

- **TOXICS (Hazardous Air Pollutants)**

The recommendation of the Commission is to support the House version of the toxics provisions. The House provisions call for a study of hazardous air pollutant emissions from electric utilities and regulation only if appropriate and justified by the results of the study.

The Senate version calls for a study of emissions and then regulation for mercury and particulate emissions. This regulation will have to be met within eight years of enactment. Obviously, the Senate version requires regulation even if the study results indicate regulation is not warranted.

- **VISIBILITY PROTECTION**

The Commission recommends supporting the Senate version of the visibility protection regulations. Current law requires EPA to address the

visibility issue. To date, EPA has not adopted regional haze regulations because there has been inadequate technical information and scientific basis to warrant regulatory controls. The Senate version calls for a scientific study of regional haze, including the effects of emission reductions accomplished under other provisions of the act. Additionally, it calls for implementation of present law.

The House version has several troubling provisions. The most troublesome of these is the authorization to allow the Federal Land Manager to stop the issuance of a permit based on concerns about air quality related values. Some of these concerns can be far reaching. Equally disturbing is the prospect that repeated objections could indefinitely delay a permit from being issued. While certain areas such as the Shenandoah National Park are natural treasures and should be protected, the decision to license a facility should be based on a balance of concerns and not subject to a de facto veto authority by the Federal Land Manager. This decision should rest only with the State.

The second major concern about the House visibility protection measures is the requirement for almost immediate regional haze regulations for the Western states. To date, EPA has not addressed this issue because it has not had adequate evidence upon which to base regulations. A hastily conceived program will be flawed and there is a real possibility that if such a program is developed, it will be applied to the East to satisfy existing law, regardless of its appropriateness.

- NON-ATTAINMENT/NOx CONTROLS

The Senate and House non-attainment provisions create an ozone transport region for the East. In the Senate version this region includes the entire Commonwealth of Virginia, while the House version only includes parts of Northern Virginia in the ozone transport region. Clearly, certain parts of Virginia are in the ozone non-attainment areas, but it is equally clear that some regions have much better air. Being in an ozone transport region could require unnecessary NOx controls such as selective catalytic reduction (SCR) for utility boilers and special nozzles at service stations. We urge you to adopt the House version that only includes parts of Northern Virginia in the ozone transport region.

Section 182(f) of the House Bill is a section that is confusing. However, it could be interpreted to mandate additional NOx controls above that required by the acid rain provisions. We support dropping this provision. Such additional controls should only be required when necessary.

- WEPCO

The term WEPCO has become an acronym for EPA's rules concerning when modifications to a plant trigger requirements that, in essence, subject the plant to a new source licensing process, including possible review for best available control technology. EPA is currently interpreting its modification rules in a very strict fashion. Thus, as the law now stands, installation of pollution control equipment could trigger these unnecessary requirements and discourage the installation of new pollution control equipment, a result which is clearly counter to the intent of the Clean Air Act Amendments of 1990.

The WPECO problem has only been partially addressed in the amendments. The House amendments provide the best potential fix. Recently, some members of Congress and the Department of Energy have proposed a solution and have suggested legislative language to resolve this problem. We strongly support these efforts to provide a broad "WEPCO fix" to the electric utility industry and feel that the "fix" should be incorporated into the amendments.

COMMONWEALTH of VIRGINIA

COAL AND ENERGY COMMISSION

910 CAPITOL STREET
SECOND FLOOR
RICHMOND, VIRGINIA 23219

General Assembly Building
January 7, 1991

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

The Honorable Frederick C. Boucher
U.S. House of Representatives
428 Cannon House Office Building
Washington, D.C. 20515

Dear Congressman Boucher:

It has once again come to the attention of the Virginia Coal and Energy Commission that the Commonwealth, because it is under the administrative jurisdiction of EPA's Region III, is at a distinct competitive disadvantage in attracting or keeping certain businesses. The difficulty and delay encountered by cogeneration firms attempting to obtain permits so they can operate in Virginia are not encountered by similar firms who apply for the same permits in North Carolina. This is because North Carolina falls under the administrative jurisdiction of EPA's Region IV.

The Commission believes that Region IV has implemented a more reasoned approach which adequately balances environmental and economic concerns. Region IV's approach also allows permits to be processed in a more expeditious manner.

To ensure that the Commonwealth is able to compete with other states on a level playing field, and in view of the disparity in treatment of permit applicants under EPA's Regions III and IV, the Commission requests that you take whatever action is necessary to place Virginia under the administrative jurisdiction of EPA's Region IV.

The Commission appreciates your consideration of this request.

Sincerely,

Danny W. Bird

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

cc: All members of Virginia's Congressional Delegation

COMMONWEALTH of VIRGINIA

COAL AND ENERGY COMMISSION

910 CAPITOL STREET
SECOND FLOOR
RICHMOND, VIRGINIA 23219

General Assembly Building

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

January 7, 1991

The Honorable L. Douglas Wilder
Governor of Virginia
State Capitol, 3rd Floor
Richmond, Virginia 23219

Dear Governor Wilder:

At its most recent meeting, the Virginia Coal and Energy Commission received a report on the status of various energy assistance programs in the Commonwealth. As you are aware, two of these programs, the Weatherization Assistance Program and the Low Income Housing Energy Assistance Program, were funded for only the first year of the current biennium.

The Commission believes that both of these programs are extremely important to the elderly and low income residents of Virginia. While LIHEAP provides money for fuel to these residents during harsh weather conditions, the WAP provides monies necessary to weatherize their homes, which in turn results in fuel savings and greater energy efficiency. Even though these programs received funding for FY 1989-90, LIHEAP ran out of money in February and had to apply for emergency federal dollars. The WAP was unable to provide statewide coverage and was forced to close local offices in Northern Virginia and the Shenandoah Valley.

While the Commission realizes that these are difficult fiscal times for the Commonwealth, we believe that the services offered by both of these programs are essential and necessary. Consequently, the Commission strongly recommends and requests that you support budget amendments to accomplish the following:

1. Provide funding during FY 1991-92 for the Low Income Housing Energy Assistance Program at a level at least as high as the program received for FY 1990-91, in order to ensure the program can provide statewide coverage; and

2. Provide funding during FY 1991-92 for the Weatherization Assistance Program which is sufficient to allow the program to provide statewide coverage.

The Commission appreciates your consideration of this request.

Sincerely,

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