

September 1988

FINANCIAL AUDIT

Tennessee Valley Authority's Financial Statements for 1987



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**Comptroller General
of the United States**

B-114850

September 30, 1988

To the President of the Senate and the
Speaker of the House of Representatives

This report presents the results of our review of the independent certified public accountant's audit of the Tennessee Valley Authority's (TVA) financial statements for the fiscal year ended September 30, 1987. In the auditor's opinion, subject to the effects of adjustments, if any, as might have been required because of uncertainties concerning the completion of the nuclear power program, the Tennessee Valley Authority's statements are fairly presented. This matter is discussed in the next paragraph. The independent auditor's reports on TVA's internal accounting controls and on its compliance with laws and regulations are also provided.

TVA has nine nuclear power plants, five of which are completed but non-operative pending compliance with Nuclear Regulatory Commission (NRC) requirements. Two of the three plants under construction have unresolved safety issues. Construction was deferred on another plant in 1985 due to a reduction in the forecasted growth in demand for electric energy in the region. TVA expects to resume construction of this plant and complete it by 1995. There is no certainty that the NRC will approve the return to service of all plants, nor is there any certainty that the demand for electricity will be sufficient to justify the return to service or the completion of all nuclear power plants.

The Tennessee Valley Authority was established in 1933 by the Tennessee Valley Authority Act (16 U.S.C. 831) to develop the resources of the Tennessee Valley region. It fulfills its purpose by producing electric power; encouraging agricultural, economic, and industrial development; providing for flood control and improving navigation on the Tennessee River; and helping the region manage its natural resources and protect its environment. During 1987, TVA sold 108 billion kilowatt hours of electricity for \$5.2 billion.

TVA is authorized by 16 U.S.C. 831n-4(c) to arrange for audits of its accounts by certified public accounting firms. TVA contracted with an independent certified public accounting firm, Coopers & Lybrand, to perform a financial and compliance audit of its 1987 financial statements in accordance with generally accepted auditing standards. For fiscal year 1988 and beyond, the audit contract provides for the audit to be conducted in accordance with generally accepted government auditing

standards. The Government Corporation Control Act (31 U.S.C. 9105) requires the Comptroller General to audit TVA's financial transactions at least once every 3 years. To fulfill our audit responsibilities, avoid duplication and unnecessary expense, and make the most efficient use of our resources, we reviewed the independent auditor's work and reports.

We conducted our review of the auditor's work in accordance with generally accepted government auditing standards. To determine the reasonableness of the auditor's work and the extent to which we could rely on it, we

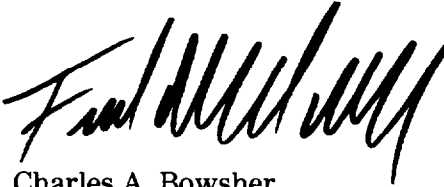
- reviewed the auditor's approach and planning of the audit,
- evaluated the qualifications and independence of the audit staff,
- reviewed the financial statements and auditor's reports to evaluate compliance with generally accepted accounting principles and generally accepted government auditing standards, and
- reviewed and tested the auditor's working papers to determine (1) the nature, timing, and extent of audit work performed, (2) the extent of audit quality control methods the auditor used, (3) whether a study and evaluation was conducted of the entity's internal accounting controls, (4) whether the auditor tested transactions for compliance with applicable laws and regulations, and (5) whether the evidence in the working papers supported the auditor's opinion on the financial statements and internal accounting control and compliance reports.

In the opinion of Coopers & Lybrand, subject to the effects of the uncertainties concerning the completion of the nuclear power program as previously mentioned, Tennessee Valley Authority's financial statements present fairly its financial position as of September 30, 1987, the results of its operations and the changes in its financial position for the year then ended, in conformity with generally accepted accounting principles. Also, Coopers & Lybrand's reports to TVA's board of directors on internal accounting controls and on compliance with laws and regulations did not disclose any material internal control weaknesses or noncompliance with laws and regulations.

During our review, we found nothing to indicate that Coopers & Lybrand's opinion on TVA's 1987 financial statements was inappropriate or cannot be relied on. Nor did we find anything to indicate that the auditor's reports on internal accounting controls and on compliance with laws and regulations were inappropriate or cannot be relied on. We believe that the financial statements, together with Coopers & Lybrand's opinion and our review of that work, provide the Congress

with a dependable basis for overseeing the Tennessee Valley Authority's financial position. This report presents the Tennessee Valley Authority's financial statements and the auditor's opinion thereon.

We are sending copies of this report to the Director of the Office of Management and Budget; the Secretary of the Treasury; the Secretary of Energy; the Chairmen of the Senate Committee on Environment and Public Works and the House Committee on Public Works and Transportation; and the Board of Directors of the Tennessee Valley Authority.


Charles A. Bowsher
Comptroller General
of the United States

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Abbreviation

TVA Tennessee Valley Authority

Auditor's Opinion

**Coopers
& Lybrand**

certified public accountants

1600 Plaza Tower
Knoxville, Tennessee 37909
Telephone (615) 524-4000

in principal areas of the world

To the Board of Directors of
Tennessee Valley Authority

We have examined the balance sheets (power program and all programs) of Tennessee Valley Authority as of September 30, 1987 and 1986, and the related statements of income and retained earnings (power program), net expense and accumulated net expense (nonpower programs), and changes in financial position (power program and all programs) for each of the three years in the period ended September 30, 1987 (Exhibits I through IV). Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As discussed in Note 3 to the financial statements, there are uncertainties concerning the completion of the nuclear power program of Tennessee Valley Authority. The completed nuclear production plant is presently not in operation due to continuing efforts to comply with requirements the Nuclear Regulatory Commission mandates for the industry and the desire to complete additional testing required by internal procedures of Tennessee Valley Authority. Certain nuclear production plant included in construction in progress is considered substantially complete by Tennessee Valley Authority but has not undergone fuel loading and low power testing due to certain unresolved safety issues. Additional nuclear production plant is under construction or construction has been deferred. The present plan of Tennessee Valley Authority is to return to service all completed nuclear production plant and to complete construction of and to place in service all remaining nuclear plants. However, there is no certainty that the Nuclear Regulatory Commission will approve the return to service of all plant. Also, there is no certainty that the demand for electricity will be sufficient to justify the return to service or the completion of all nuclear production plant. Under such circumstances, the Board of Directors may elect not to recover from the ratepayers all costs associated with the nuclear power program. The ultimate outcome of these matters cannot be determined at this time.

In our opinion, subject to the effects on the 1987 and 1986 financial statements of such adjustments, if any, as might have been required had the outcome of the uncertainties discussed in the preceding paragraph been known, the financial statements referred to above present fairly the financial position of the power program and all programs of Tennessee Valley Authority as of September 30, 1987 and 1986, and the results of operations of the power program and nonpower programs and the changes in financial position of the power program and all programs for each of the three years in the period ended September 30, 1987, in conformity with generally accepted accounting principles applied on a consistent basis.

Our examinations were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental Schedules A through F are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the examination of the basic financial statements, and, in our opinion, subject to the effects on the 1987 and 1986 financial statements of such adjustments, if any, as might have been required had the outcome of the uncertainties discussed in the second preceding paragraph been known, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Coopers & Lybrand

Knoxville, Tennessee
February 18, 1988

Auditor's Report on Internal Accounting Controls

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To the Board of Directors of
Tennessee Valley Authority

We have examined the financial statements of Tennessee Valley Authority for the year ended September 30, 1987, and have issued our report thereon, dated February 18, 1988, in which our opinion is qualified for uncertainties related to the nuclear power program. As part of our examination we made a study and evaluation of the system of internal accounting control to the extent we considered necessary to evaluate the system as required by generally accepted auditing standards. The purpose of our study and evaluation was to determine the nature, timing, and extent of the auditing procedures necessary for expressing an opinion on the financial statements. Our study and evaluation was more limited than would be necessary to express an opinion on the system of internal accounting control taken as a whole.

The management of Tennessee Valley Authority is responsible for establishing and maintaining a system of internal accounting control. In fulfilling that responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of control procedures. The objectives of a system are to provide management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of financial statements in accordance with generally accepted accounting principles.

Because of inherent limitations in any system of internal accounting control, errors or irregularities may nevertheless occur and not be detected. Also, projection of any evaluation of the system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or that the degree of compliance with procedures may deteriorate.

Our study and evaluation made for the limited purpose described in the first paragraph would not necessarily disclose all material weaknesses in the system. Accordingly, we do not express an opinion on the system of internal accounting control of Tennessee Valley Authority taken as a whole. However, our study and evaluation disclosed no condition that we believed to be a material weakness.

**Auditor's Report on Internal
Accounting Controls**

To the Board of Directors of
Tennessee Valley Authority
Page Two

Our separate report to management contains comments relating to internal accounting controls and operating efficiencies resulting from our examination of the financial statements for the year ended September 30, 1987. In particular, we believe the management of Tennessee Valley Authority should address our recommendations relating to the attention to be given to the control and assessment of the nuclear power program.

This report is intended solely for the use of management of Tennessee Valley Authority and the General Accounting Office and should not be used for any other purpose.

A handwritten signature in cursive script, reading "Cooper & Lybrand".

Knoxville, Tennessee
February 18, 1988

Auditor's Report on Compliance With Laws and Regulations

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To the Board of Directors of
Tennessee Valley Authority

We have examined the financial statements of Tennessee Valley Authority as of and for the year ended September 30, 1987, and have issued our report thereon dated February 18, 1988, in which our opinion is qualified for uncertainties related to the nuclear power program. Our report indicates that completed nuclear production plant of Tennessee Valley Authority is presently not in operation due to continuing efforts to comply with requirements the Nuclear Regulatory Commission mandates for the industry and the desire to complete additional testing required by internal procedures of Tennessee Valley Authority. Certain nuclear production plant included in construction in progress is considered substantially complete by Tennessee Valley Authority but has not undergone fuel loading and low power testing due to certain unresolved safety issues. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In connection with our examination, we have inquired of management concerning the provisions of laws and regulations applicable to Tennessee Valley Authority; we have received a representation from management concerning compliance with such laws and regulations; and we have received letters from General Counsel and special counsel concerning certain contingencies, all to determine compliance with the requirements which would have a material financial statement impact in the event of noncompliance.

In our opinion, subject to approval from the Nuclear Regulatory Commission to resume operations at completed nuclear production plant and to operate nuclear production plant presently not complete, Tennessee Valley Authority complied with the requirements of applicable laws and regulations which would have a material financial statement impact in the event of noncompliance. With regard to the requirements of applicable laws and regulations where noncompliance would not have a material effect on the financial statements, in our judgment nothing came to our attention to warrant additional disclosure in the financial statements to indicate noncompliance by Tennessee Valley Authority. However, it should be noted that our examination was not directed primarily towards obtaining knowledge of noncompliance with requirements that are not material to the financial statements.

**Auditor's Report on Compliance With Laws
and Regulations**

To the Board of Directors of
Tennessee Valley Authority
Page Two

This report is intended solely for the use of management of
Tennessee Valley Authority and the General Accounting Office and
should not be used for any other purpose.

Cooper & Lybrand

Knoxville, Tennessee
February 18, 1988

Financial Statements

Balance Sheets

BALANCE SHEETS SEPTEMBER 30, 1987 AND 1986

ASSETS

	Power program		All programs	
	1987	1986	1987	1986
	(Thousands of Dollars)			
PROPERTY, PLANT, AND EQUIPMENT				
Completed plant; schedule A				
Other than nuclear				
Multipurpose dams; note 2	\$ 563,555	\$ 555,617	\$ 1,442,297	\$ 1,433,671
Single-purpose dams	400,290	399,780	400,290	399,780
Steam production plant	4,190,142	4,115,522	4,190,142	4,115,522
Other electric plant	3,033,570	2,978,598	3,033,570	2,978,598
Other plant	-	-	372,231	421,182
	<u>8,187,557</u>	<u>8,049,517</u>	<u>9,438,530</u>	<u>9,348,753</u>
Less accumulated depreciation and depletion; note 1	3,037,508	2,861,652	3,290,633	3,118,958
	<u>5,150,049</u>	<u>5,187,865</u>	<u>6,147,897</u>	<u>6,229,795</u>
Nuclear production plant (nonoperating); note 3	3,022,453	2,941,918	3,022,453	2,941,918
Less accumulated depreciation; note 1	670,078	569,636	670,078	569,636
	<u>2,352,375</u>	<u>2,372,282</u>	<u>2,352,375</u>	<u>2,372,282</u>
Completed plant, net	<u>7,502,424</u>	<u>7,560,147</u>	<u>8,500,272</u>	<u>8,602,077</u>
Construction in progress; schedule B and note 4				
Nuclear plant construction; note 3	8,402,318	7,461,946	8,402,318	7,461,946
Other construction	374,675	361,765	479,051	462,257
	<u>8,776,993</u>	<u>7,823,711</u>	<u>8,881,369</u>	<u>7,924,203</u>
Deferred nuclear generating unit; note 3	<u>793,072</u>	<u>793,072</u>	<u>793,072</u>	<u>793,072</u>
Capital lease assets; note 5				
Nuclear fuel	1,830,914	1,843,198	1,830,914	1,843,198
Other facilities	247,306	243,349	247,306	243,349
	<u>2,078,220</u>	<u>2,086,547</u>	<u>2,078,220</u>	<u>2,086,547</u>
Nuclear fuel; schedule B	<u>874,568</u>	<u>678,443</u>	<u>874,568</u>	<u>678,443</u>
Less accumulated amortization; schedule B and note 1	670,151	670,151	670,151	670,151
Nuclear fuel, net	<u>204,417</u>	<u>8,292</u>	<u>204,417</u>	<u>8,292</u>
Total	<u>19,355,126</u>	<u>18,271,769</u>	<u>20,457,350</u>	<u>19,414,191</u>
INVESTMENT FUNDS				
at amortized cost; note 6	<u>710,599</u>	<u>502,065</u>	<u>710,599</u>	<u>502,065</u>
CURRENT ASSETS				
Cash	6,584	31,736	86,215	125,535
Accounts receivable	695,464	520,975	713,344	534,468
Inventories, principally at average cost	<u>570,950</u>	<u>514,383</u>	<u>580,699</u>	<u>529,156</u>
Total	<u>1,272,998</u>	<u>1,067,094</u>	<u>1,380,258</u>	<u>1,189,159</u>
DEFERRED CHARGES AND OTHER ASSETS				
Loans and other long-term receivables	297,765	279,574	346,104	326,514
Unamortized cost of canceled nuclear generating units; note 1	2,135,072	2,363,103	2,135,072	2,363,103
Nuclear production plant compliance costs; note 1	283,532	-	283,532	-
Mine and mill development costs, net; schedule B and note 1	146,380	154,207	146,380	154,207
Energy conservation costs, net; note 1	-	76,769	-	76,769
Unamortized debt issue and reacquisition expense; note 1	52,371	52,189	52,371	52,189
Other deferred charges; schedule B	<u>63,503</u>	<u>38,967</u>	<u>63,503</u>	<u>38,967</u>
Total	<u>2,978,623</u>	<u>2,964,809</u>	<u>3,026,962</u>	<u>3,011,749</u>
Total assets	<u>\$24,317,346</u>	<u>\$22,805,737</u>	<u>\$25,575,169</u>	<u>\$24,117,164</u>

Notes 1 through 14 following the exhibits are an integral part of the financial statements.

Financial Statements

CAPITALIZATION AND LIABILITIES

	Power program		All programs	
	1987	1986	1987	1986
	(Thousands of Dollars)			
PROPRIETARY CAPITAL				
Appropriation investment; note 7				
Congressional appropriations	\$ 1,419,595	\$ 1,419,584	\$ 4,491,580	\$ 4,392,785
Transfers of property from other Federal agencies, net	23,779	23,757	61,027	59,815
	1,443,374	1,443,341	4,552,607	4,452,600
Less repayments to General Fund of the U.S. Treasury; note 9	655,059	635,059	697,175	677,018
Appropriation investment	788,315	808,282	3,855,432	3,775,582
Retained earnings reinvested in the power program; exhibit II	2,395,723	2,018,744	2,395,723	2,018,744
Accumulated net expense of nonpower programs; exhibit III	-	-	(1,891,830)	(1,737,597)
Total	3,184,038	2,827,026	4,359,325	4,056,729
LONG-TERM DEBT				
Principal; note 10	17,505,000	16,105,000	17,505,000	16,105,000
Less unamortized discount; note 1	2,643	3,435	2,643	3,435
Total	17,502,357	16,101,565	17,502,357	16,101,565
OTHER LIABILITIES				
Capital lease obligations; note 5	2,076,189	2,084,604	2,076,189	2,084,604
Lease payments; note 5	38,342	17,264	38,342	17,264
Decommissioning of nuclear plant; note 1	128,364	95,106	128,364	95,106
Reclamation of coal properties	22,560	16,907	22,560	16,907
Cancellation costs for nuclear generating units; note 1	-	15,394	-	15,394
Total	2,265,455	2,229,275	2,265,455	2,229,275
CURRENT LIABILITIES				
Short-term debt; note 10				
U.S. Treasury	150,000	150,000	150,000	150,000
Federal Financing Bank	261,000	52,000	261,000	52,000
Short-term debt	411,000	202,000	411,000	202,000
Current maturities of long-term debt	-	545,000	-	545,000
Current portion of capital lease obligations; note 5	2,031	1,943	2,031	1,943
Accounts payable	511,302	478,663	561,997	534,370
Employees' accrued leave	54,903	45,348	81,451	67,596
Payrolls accrued	18,969	13,979	24,262	17,748
Interest accrued	367,291	360,938	367,291	360,938
Total	1,365,496	1,647,871	1,448,032	1,729,595
COMMITMENTS AND CONTINGENCIES; notes 4, 8, 12, and 14				
Total capitalization and liabilities	\$24,317,346	\$22,805,737	\$25,575,169	\$24,117,164

Financial Statements

Statements of Power Program Income and Retained Earnings

FOR THE YEARS ENDED SEPTEMBER 30, 1987, 1986, AND 1985

	1987		1986		1985	
	kwh	Amount	kwh	Amount	kwh	Amount
	(Thousands)					
OPERATING REVENUES						
Sales of electric energy						
Municipalities and cooperatives	90,686,471	\$3,974,369	84,884,317	\$3,486,923	82,155,187	\$3,272,255
Federal agencies; note 13	2,016,311	595,923	2,026,732	517,550	5,216,229	565,898
Industries	14,538,921	501,519	14,982,758	556,356	15,424,411	628,995
Electric utilities	439,234	20,331	426,043	18,301	391,205	15,837
Interdivisional	258,964	12,333	273,654	12,974	356,863	15,586
Total sales of electric energy	<u>107,939,901</u>	<u>5,104,475</u>	<u>102,593,504</u>	<u>4,592,104</u>	<u>103,543,895</u>	<u>4,498,571</u>
Rents		32,627		27,478		25,949
Discounts and penalties		88		127		1,265
Other miscellaneous revenues		18,927		19,008		21,701
Total operating revenues		<u>5,156,117</u>		<u>4,638,717</u>		<u>4,547,486</u>
OPERATING EXPENSES; schedule C						
Production; note 8						
Fuel		1,162,845		1,313,439		1,427,148
Other		979,184		801,505		556,950
Transmission		46,820		47,550		43,139
Customer accounts		64,848		69		(11,242)
Power consumer services		75,867		24,595		18,189
Demonstration of power use		45,060		20,329		24,348
Research, development, and demonstrations		54,915		57,226		52,105
General and administrative		321,873		252,074		215,360
Payments in lieu of taxes		203,117		195,949		188,248
Amortization of loss on canceled nuclear generating units; note 1		31,750		-		-
Provision for depreciation		313,734		305,325		287,566
Total operating expenses		<u>3,300,013</u>		<u>3,018,061</u>		<u>2,801,811</u>
Operating income		<u>1,856,104</u>		<u>1,620,656</u>		<u>1,745,675</u>
OTHER INCOME AND DEDUCTIONS						
Interest income		67,862		51,379		33,216
Abandonment of uranium properties		(22,243)		-		(117,000)
Charge related to loss on canceled nuclear generating units; note 1		(185,163)		(226,459)		(180,490)
Other, net		(32,433)		(21,003)		(21,595)
Total other income and deductions		<u>(171,977)</u>		<u>(196,083)</u>		<u>(286,069)</u>
Income before interest charges		<u>1,684,127</u>		<u>1,424,573</u>		<u>1,459,606</u>
INTEREST CHARGES						
Interest on long-term debt		1,721,255		1,658,212		1,547,996
Other interest expense		28,181		32,606		61,867
Allowance for borrowed funds used during construction; note 1		(523,186)		(542,495)		(577,645)
Amortization of long-term debt discount and expense; note 1		6,592		1,981		972
Net interest charges		<u>1,232,842</u>		<u>1,150,304</u>		<u>1,033,190</u>
NET INCOME		451,285		274,269		426,416
Return on appropriation investment; note 9		<u>74,306</u>		<u>85,979</u>		<u>96,546</u>
Increase in retained earnings reinvested		376,979		188,290		329,870
Retained earnings reinvested at beginning of period		<u>2,018,744</u>		<u>1,830,454</u>		<u>1,500,584</u>
Retained earnings reinvested at end of period		<u>\$2,395,723</u>		<u>\$2,018,744</u>		<u>\$1,830,454</u>

Notes 1 through 14 following the exhibits are an integral part of the financial statements.

Financial Statements

Statement of Nonpower Programs Net Expense and Accumulated Net Expense

FOR THE YEARS ENDED SEPTEMBER 30, 1987, 1986, AND 1985

	1987	1986	1985
	(Thousands of Dollars)		
NATURAL RESOURCES DEVELOPMENT			
Navigation operations	\$ 12,080	\$ 11,831	\$ 11,410
System flood control operations	10,013	9,846	9,040
Recreation development	9,527	8,405	7,886
Regional water management	4,276	4,578	4,142
Fisheries and wildlife resources development	1,504	1,649	1,638
Conservation of public lands and water	898	1,015	970
Environmental energy education	531	596	515
Agricultural institute	4,149	4,225	5,812
Fuels research	2,819	4,279	5,444
Forest resources	1,794	1,805	1,951
Acidic deposition	369	397	-
Industrial skills development	3,166	4,006	3,354
Economic projects and demonstrations	5,575	2,614	6,429
Waterway development and engineering assistance	3,871	809	1,635
Tennessee-Tombigbee waterway development	1,053	1,347	874
Special opportunities cities and counties program	4,563	3,203	4,264
Minority economic development	587	1,065	1,036
Floodplain management	1,922	2,410	350
Waste management	1,968	1,521	1,568
Land Between The Lakes operations	7,865	8,246	8,422
Valley mapping and remote sensing	1,140	1,080	1,108
Economic technical assistance	1,018	3,956	-
Other natural resources development projects	422	1,272	1,351
Net expense of natural resources development	81,110	80,155	79,199
FERTILIZER DEVELOPMENT; note 1			
Research and development			
Research and development	21,912	21,354	26,806
Loss on retirement of demonstration plant	29,692	-	-
Total research and development	51,604	21,354	26,806
Fertilizer technology introduction			
Fertilizer industry demonstrations	4,138	3,846	4,058
Farm test demonstrations outside the Valley	591	481	1,540
Product/process research and testing	4,594	5,382	-
Net expense of fertilizer technology development	9,323	9,709	5,598
Developmental production			
Cost of products distributed	34,128	27,070	30,398
General expenses			
Loss on retirements of manufacturing plant and equipment, net	680	(1,117)	474
Gain on sale of phosphate reserves	(7,454)	-	-
Loss on inventory decline	(4,084)	1,819	1,562
General and administrative	1,096	1,271	1,171
Other	(4,044)	(5,194)	108
Total general expenses	(13,806)	(3,221)	3,315
Total production expense	20,322	23,849	33,713
Less transfers and sales of products			
Transfers to other TVA programs, at market prices	12,017	9,789	16,225
Direct sales	304	108	500
Total transfers and sales	12,321	9,897	16,725
Net expense of developmental production	8,001	13,952	16,988
Net expense of fertilizer development	68,928	45,015	49,392
OTHER EXPENSE, NET	4,196	894	787
NET EXPENSE; schedule D	154,234	126,064	129,378
Accumulated net expense at beginning of period	1,737,596	1,611,533	1,482,155
Accumulated net expense at end of period	\$1,891,830	\$1,737,597	\$1,611,533

Notes 1 through 14 following the exhibits are an integral part of the financial statements.

Financial Statements

Statements of Changes in Financial Position

EXHIBIT IV
PAGE 1

FOR THE YEARS ENDED SEPTEMBER 30, 1987, 1986, AND 1985

	Power program			All programs		
	1987	1986	1985	1987	1986	1985
	(Thousands of Dollars)					
SOURCE OF FUNDS						
Program sources						
Net power income; exhibit II	\$ 451,285	\$ 274,269	\$ 426,416	\$ 451,285	\$ 274,269	\$ 426,416
Items not requiring funds; note a	51,750	20,000	20,000	51,750	20,000	20,000
Funds from power operations	503,035	294,269	446,416	503,035	294,269	446,416
Sale of power assets, principally nuclear fuel sales	57,104	115,140	120,806	57,104	115,140	120,806
Funds from power program; note b	560,139	409,409	567,222	560,139	409,409	567,222
Net expense of nonpower programs; exhibit III				(154,234)	(126,064)	(129,378)
Add items not requiring funds; note a				52,324	17,788	18,641
Funds used in nonpower operations				(101,910)	(108,276)	(110,737)
Sale of nonpower facilities				1,470	3,069	1,809
Funds used in nonpower programs				(100,440)	(105,207)	(108,928)
Debt sources						
Long-term bonds						
Issues	1,600,000	2,425,000	1,100,000	1,600,000	2,425,000	1,100,000
Redemptions	(745,000)	(1,300,000)	-	(745,000)	(1,300,000)	-
Reclassification of current maturities	-	(545,000)	(100,000)	-	(545,000)	(100,000)
Short-term notes						
Issues	20,100,000	22,432,000	31,799,000	20,100,000	22,432,000	31,799,000
Redemptions	(19,891,000)	(22,861,000)	(32,003,000)	(19,891,000)	(22,861,000)	(32,003,000)
Total debt sources	1,064,000	151,000	796,000	1,064,000	151,000	796,000
Other sources						
Recovery of costs of canceled and deferred nuclear units	11,413	24,203	19,970	11,413	24,203	19,970
Liability for cancellation costs for nuclear generating units, net of adjustments	-	(13,843)	(36,831)	-	(13,843)	(36,831)
Congressional appropriations	11	112	234	98,794	101,471	125,107
Property transfers	22	(16)	(22)	1,212	277	1,136
Cumulative effect of accruing unbilled revenues	89,989	-	-	89,989	-	-
Capital lease obligations	(8,416)	389,182	79,878	(8,416)	389,182	79,878
Total other sources	93,019	399,638	63,229	192,994	501,290	189,260
Total source of funds	\$ 1,717,158	\$ 960,047	\$ 1,426,451	\$ 1,716,693	\$ 956,492	\$ 1,443,554
DISPOSITION OF FUNDS						
Expended for plant and equipment, excluding allowance for borrowed funds used	\$ 946,566	\$ 914,673	\$ 1,029,578	\$ 961,392	\$ 932,624	\$ 1,056,808
Less:						
Depreciation and depletion allowances charged to construction clearing accounts and other asset categories	17,081	13,575	12,355	18,894	15,476	14,407
Cost of removing retired facilities and salvage from retained materials	(4,467)	(10,904)	(8,282)	(5,050)	(11,060)	(8,794)
Expended for nuclear production plant compliance costs	283,532	-	-	283,532	-	-
Capital lease assets	(8,327)	389,340	80,024	(8,327)	389,340	80,024
Payments to U.S. Treasury; note 9	74,306	85,979	96,546	74,306	85,979	96,546
Return on appropriation investment	20,000	20,000	20,000	20,157	20,142	20,091
Repayments of appropriation investment	94,306	105,979	116,546	94,463	106,121	116,637
Investment of funds	144,000	126,254	155,634	144,000	126,254	155,634
Changes in other assets and liabilities						
Bond issue and reacquisition expense	5,982	48,419	-	5,982	48,419	-
Loans and other long-term receivables	18,191	(8,174)	(4,943)	19,590	(3,499)	(406)
Mine and mill development cost	39,136	9,979	12,543	39,136	9,979	12,543
Energy conservation cost	29,604	31,331	31,973	29,604	31,331	31,973
Cancellation costs for nuclear generating units, net of adjustments	-	(13,843)	(36,831)	-	(13,843)	(36,831)
Payment of cancellation costs for nuclear generating units	15,690	26,808	34,679	15,690	26,808	34,679
Other	8,814	8,144	3,088	8,814	8,144	3,088
Changes in working capital (increase or decrease)	117,417	100,664	40,489	118,816	105,339	45,026
Cash	(25,152)	(105,128)	5,379	(39,320)	(125,892)	(9,883)
Accounts receivable	174,489	39,690	(125,144)	178,876	38,340	(124,742)
Inventories	56,567	(50,641)	(128,773)	51,543	(52,397)	(127,907)
Less other current liabilities (excluding short-term debt, including current maturities of long-term debt)	205,904	(116,079)	(248,538)	191,099	(139,949)	(262,532)
Total disposition of funds	\$ 1,717,158	\$ 960,047	\$ 1,426,451	\$ 1,716,693	\$ 956,492	\$ 1,443,554

Financial Statements

EXHIBIT IV
PAGE 2

FOR THE YEARS ENDED SEPTEMBER 30, 1987, 1986, AND 1985

NOTES:

a. Items not requiring funds:

	Power			Nonpower		
	1987	1986	1985	1987	1986	1985
	(Thousands of Dollars)					
Provision for depreciation	\$313,734	\$305,325	\$287,566	\$18,547	\$17,484	\$17,813
Amortization of loss on cancelled nuclear units	216,914	226,459	180,690	-	-	-
Net loss (gain) on retirements and disposals of property, plant, and equipment	53	181	3,152	33,777	304	828
Abandonment of uranium properties	22,243	-	117,000	-	-	-
Cumulative effect of expensing energy conservation costs	76,769	-	-	-	-	-
Amortization of energy conservation cost	29,604	30,965	29,231	-	-	-
Provision for lease payments	24,000	18,645	619	-	-	-
Provision for writeoff of uranium properties	15,720	15,720	16,500	-	-	-
Provision for reclamation and other costs of coal properties	15,891	2,810	3,830	-	-	-
Provision for decommissioning nuclear plants	33,258	28,269	25,535	-	-	-
Cumulative effect of accruing unbilled revenues	(89,989)	-	-	-	-	-
Reclassification of prior years' costs	(5,437)	-	(28,364)	-	-	-
Allowance for recovery of operating expense	(19,882)	(20,553)	(11,340)	-	-	-
Amortization of long-term debt discount and expense	6,592	1,981	972	-	-	-
Amortization of discount on decommissioning fund investments	(23,379)	(20,822)	(18,443)	-	-	-
Amortization of discount on bond retirement fund investments	(41,155)	(26,485)	(9,303)	-	-	-
Allowance for borrowed funds used during construction	(523,186)	(542,495)	(577,645)	-	-	-
	<u>\$ 51,750</u>	<u>\$ 20,000</u>	<u>\$ 20,000</u>	<u>\$52,324</u>	<u>\$17,788</u>	<u>\$18,641</u>

b. Net power proceeds (see note 9) may be derived as follows:

	Year ended September 30		
	1987	1986	1985
	(Thousands of Dollars)		
Funds from power program	\$ 560,139	\$ 409,409	\$ 567,222
Add interest	<u>1,749,436</u>	<u>1,690,818</u>	<u>1,609,863</u>
Net power proceeds	<u>\$2,309,575</u>	<u>\$2,100,227</u>	<u>\$2,177,085</u>

Notes 1 through 14 following the exhibits are an integral part of the financial statements.

Notes to Financial Statements

1. Summary of significant accounting policies--Power accounts are kept in accordance with the uniform system of accounts prescribed by the Federal Energy Regulatory Commission.

Plant additions and retirements--Additions to plant are recorded at cost, which includes material, labor, overhead, and allowance for funds used. The costs of generation during preliminary operations prior to commercial acceptance, including amortization of nuclear fuel less credit for the fair value of energy generated, are also included in the recorded costs of steam and nuclear generating plants. Except for chemical plant, plant retirements (including original cost and removal cost less salvage) are charged against appropriate accumulated depreciation accounts.

Depreciation and depletion--Straight-line depreciation is provided for substantially on a composite basis. Rates of depreciation are derived from engineering studies of useful life and are reviewed each year. Depletion of coal land and landrights and phosphate land and mineral rights is provided on a unit of production basis.

Decommissioning--Provision for decommissioning costs of nuclear generating units is derived through engineering studies of useful life and estimated costs based on the dismantling/removal method. The cost estimates for decommissioning as provided in fiscal year 1987 were based on a current dollar value amounting to \$105 million and \$117 million per unit, respectively, for pressurized water and boiling water reactors.

Allowance for funds used--The practice of capitalizing an allowance for funds used during construction is followed in the power program. In accordance with the TVA Board of Directors' criteria for establishing wholesale power rates, the allowance is applicable to construction in progress excluding generating facilities in a deferred status. The amount of interest capitalized is limited to the amount of depreciation and other noncash charges less the amount of the repayment of the appropriation investment to the U.S. Treasury. The method used provides for the monthly calculation of interest on debt equivalent to the average balance of construction work in progress. The interest is calculated on the most recent debt issues except for those representing refunding of existing debt, in which case the maturity date of the original issue is used.

Repairs and maintenance--The cost of current repairs and minor replacements is charged to appropriate operating expense and clearing accounts, and the cost of renewals and betterments is capitalized.

Nuclear fuel--The cost of nuclear fuel is charged to operations on a unit of production basis in amounts equal to lease payments (the cost of fuel burned plus finance charges) and a provision for spent nuclear fuel disposal.

Valuation of investments--Investments are recorded at amortized cost. Discounts are amortized at the yield rate over the life of each instrument.

Unamortized cost of canceled nuclear generating units--By action of the TVA Board of Directors, the unamortized cost of canceled nuclear generating units is being recovered through rates from customers and therefore is recorded as a deferred charge on the balance sheet. In accordance with the Board action, the amount of unamortized cost to be expensed will be approximately \$245 million in 1988 and \$270 million each year from 1989 through 1995.

Nuclear production plant compliance costs--The costs incurred by TVA at the nonoperating nuclear production plants to accomplish the corrective actions necessary to obtain the Nuclear Regulatory Commission's approval to restart the plants are being deferred and will be charged to operations over a ten-year period beginning with the restart of each idled unit. The aggregate deferral at September 30, 1987, associated with the restart effort is \$283,532,000.

Mine and mill development costs--Deferred mine and mill development costs are assigned to coal inventory and nuclear fuel on a unit of production basis determined in relation to estimated ore reserves. Each year the investment in uranium properties is evaluated to determine if any costs related to these properties may not be recovered from future operations. The balance of the estimated costs not recoverable from operations at September 30, 1987, approximately \$66 million, will be amortized over the next three years.

Accounting changes--During fiscal 1987 TVA changed the accounting methods for recognition of operating revenues and energy conservation costs. Prior to fiscal 1987 revenues from the sale of electric energy were recorded only when billed on a cycle billing basis. Beginning in fiscal 1987, in order to more clearly match revenues and expenses, TVA began accruing revenues for services rendered but unbilled. The cumulative effect of this change as of October 1, 1986, of \$90 million is included

Financial Statements

in operating revenues for fiscal 1987, the effect of which is to increase net income for fiscal 1987 by this amount. Prior to fiscal 1987, certain costs of the energy conservation program were deferred and charged to operations over a five-year period. Annual expenditures for this program now approximate the annual amortization of previously incurred costs. Since no significant impact on power rates will be realized through the continued deferral, TVA began expensing these costs as incurred in fiscal 1987. The cumulative effect of this change as of October 1, 1986, of \$77 million is included in operating expenses for fiscal 1987, the effect of which is to decrease net income for fiscal 1987 by this amount. Since the combined effect of these two accounting changes is immaterial to the fiscal 1987 results of operations, they were not displayed separately in the statement of income for 1987. These changes in accounting methods are not expected to significantly affect annual operating results.

Borrowing expenses--Issue and reacquisition expenses and discounts on power borrowings from the public are amortized on a straight-line basis over the term of the related securities. Issue expenses on power borrowings from the Federal Financing Bank are amortized over a five-year period except that amounts under six thousand dollars are expensed as incurred. Reacquisition expense of recalled debt is amortized over the remaining term of the recalled issues.

Sales of fertilizer--Sales of fertilizer materials are not made on a commercial basis, but are made to organizations collaborating in an experimental and educational program aimed at improving the manufacture, distribution, and use of fertilizers.

2. Allocation of cost of multipurpose projects--Section 14 of the TVA Act requires TVA's Board of Directors to allocate, subject to the approval of the President of the United States, the cost of completed multipurpose projects. The cost of facilities installed exclusively for a single purpose is assigned directly to that purpose; the cost of multiple-use facilities is allocated among the various purposes served.

The total investment of \$1,442,297,000 in completed multipurpose dams at September 30, 1987, is classified as follows:

	Investment	
	Direct	Multiple-use
		Total
	(Thousands)	
Power	\$349,040	\$214,515
Navigation	291,662	167,009
Flood control	65,364	189,811
Recreation	6,409	114,448
Local economic development	144	43,895
Total	\$712,619	\$729,678
		\$1,442,297

3. Nuclear power program--The nuclear power program includes nine generating units--five completed, three under construction, and one in deferred construction status--at four plant sites.

Nonoperative nuclear production plant--Nonoperative nuclear production plant consists of three units (1,152 megawatts each) at Browns Ferry (Alabama) and two units (1,221 megawatts each) at Sequoyah (Tennessee).

Browns Ferry was taken offline in March 1985 for certain plant modifications and regulatory improvements. Unit Two had been projected to return to service in 1986, Unit Three in 1987, and Unit One in 1989; no units have yet returned to service. At September 30, 1987, the projected dates for returning each unit to service were: Unit Two--1988, Unit Three--1989, and Unit One--1991.

Plant and equipment expenditures for Browns Ferry amounted to approximately \$75 million in fiscal 1987; compliance costs for the year were \$141 million. While significant additional expenditures are expected to be required for each category of costs, estimates of such amounts are not available. The undepreciated cost of Browns Ferry at September 30, 1987, is \$834 million. Aggregate annual depreciation charges of \$16 million and annual interest charges on fuel in the reactor in the amount of \$5 million for Units One and Two are effectively being deferred until future periods; annual depreciation charges of \$25 million for Unit Three and common plant and related interest charges on fuel are being charged to operations. There are also substantial construction in progress costs in the plant.

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Sequoyah is a two-unit plant which was taken offline in August 1985 when questions were raised about the adequacy of the documentation for qualifying certain equipment for operations under emergency conditions. While both units at Sequoyah were planned to return to service in 1986, neither unit returned to service in 1986 or 1987. At September 30, 1987, both units were expected to return to service in 1988.

Plant and equipment expenditures at Sequoyah amounted to approximately \$14 million in fiscal 1987; compliance costs for the year were \$142 million. While significant additional expenditures are expected to be required for each category of costs, estimates of such amounts are not available. The undepreciated cost of Sequoyah at September 30, 1987, is \$1.5 billion; depreciation charges for fiscal year 1987 were \$61 million.

Construction in progress--Nuclear plant construction in progress consists of two units (1,270 megawatts each) at Watts Bar (Tennessee) and one unit (1,332 megawatts) at Bellefonte (Alabama).

Construction at Watts Bar Unit One is substantially complete and Unit Two is approximately 85 percent complete; however, certain safety issues regarding the plant raised by construction and other TVA employees are being examined. While fuel loading did not occur as planned in 1986 or 1987, the projected dates as of September 30, 1987, for loading fuel for Unit One is 1990 and, for Unit Two, 1991. Before the Nuclear Regulatory Commission will authorize TVA to load fuel and to begin low power testing for Unit One, these issues must be resolved. It is likely that capital expenditures will be required to resolve these issues; however, the amount of such expenditures cannot be determined at this time.

TVA continues to capitalize interest on both units at Watts Bar, the investment in which was \$4.6 billion at September 30, 1987. Construction budgets, including capitalized interest, for fiscal years 1988 and 1989 are \$648 million and \$668 million, respectively. The total project cost is estimated to be \$6.6 billion, including capitalized interest.

Construction at Bellefonte Unit One was approximately 89 percent complete at September 30, 1987, with accumulated costs, including common plant, of \$3.2 billion. The costs being incurred for Unit One are to maintain systems already in place and for certain minimum levels of construction. Construction budgets, including capitalized interest, for fiscal years 1988 and 1989 are \$302 million and \$393 million, respectively.

Deferred nuclear generating unit--Construction at Bellefonte Unit Two (1,332 megawatts) ceased on or about October 1, 1985. The construction of this unit was deferred due to a reduction in the forecasted growth in demand for electric energy in the region. The costs being incurred for Unit Two are for the preservation of the current investment which is approximately \$793 million. TVA ceased capitalizing interest on Unit Two costs as of October 1, 1985. At a later date, TVA expects to resume construction of this unit with a completion date presently scheduled for 1995.

Nuclear fuel--The cost of fuel for the nonoperative nuclear plants and those units in construction in progress is recorded at \$2,035,331,000 at September 30, 1987. This cost is associated with each of the nuclear plant sites as follows:

Sequoyah Units One and Two	\$364,358,000
Browns Ferry Units One, Two, and Three	401,362,000
Watts Bar Units One and Two	222,777,000
Bellefonte Units One and Two	304,867,000
Raw materials	741,967,000

In addition to the amounts presented above, approximately \$385 million was committed under contracts as of September 30, 1987, for uranium and enrichment services. Such contracts expire no later than 2014.

The recovery of the costs associated with nuclear fuel is primarily dependent upon the completion and return to service of the nuclear generating units. At the present time, interest on fuel under the lease, including that in the reactors of the nonoperative nuclear units, is being capitalized. If the nuclear fuel, as presently fabricated, is not used in the units intended, TVA will incur additional costs to enable this fuel to be used in other units or to prepare the fuel for sale.

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Completion of nuclear power program--The timely return to service or completion of these nine nuclear generating units is subject to changes in future demand for electricity and is dependent upon receiving approvals from the Nuclear Regulatory Commission. TVA intends to return to service and to complete these nine nuclear generating units and to recover the costs associated with these plants through rates charged to customers in the future. If such intention changes, and abandonment of any of these units takes place, TVA would anticipate charging future customers for such costs; however, as in the past, TVA may elect not to recover all such costs from customers. Any significant nonrecovery of costs could result in the need for increased earnings in subsequent periods in order to issue bonds under certain provisions of the Power Bond Resolution.

The aggregate net assets at September 30, 1987, associated with the nuclear power program are summarized as follows:

	Completed Plant	Construction in Progress	Total
		(Thousands)	
Sequoyah Units One and Two	\$1,518,354	\$ 116,405	\$ 1,634,759
Browns Ferry Units One, Two, and Three	834,021	413,128	1,247,149
Watts Bar Units One and Two	-	4,658,945	4,658,945
Bellefonte Unit One and common plant	-	3,213,840	3,213,840
	<u>\$2,352,375</u>	<u>\$8,402,318</u>	<u>10,754,693</u>
Nuclear fuel--leased and owned			2,035,331
Unamortized cost of canceled nuclear generating units (note 6)			2,135,072
Sequoyah plant compliance costs			142,207
Browns Ferry plant compliance costs			141,325
Deferred generating unit--Bellefonte Unit Two			793,072
Other			<u>152,629</u>
			<u>\$16,154,329</u>

4. Expenditures for completed plant and construction projects--Projected expenditures, including capitalized interest, for completed plant and construction projects, including nuclear, amount to \$1.8 billion for each of fiscal years 1988, 1989, and 1990. These budget estimates are reviewed and revised periodically to reflect changes in economic conditions and other factors considered in their determination. Substantial commitments have been incurred for these projects.

The cost of the Worth Alabama coal gasification project, approximately \$115 million, is carried in completed plant. The project is in a Defense energy reserve status subject to an annual evaluation of the project's viability until 1991.

The construction required to complete the Columbia Dam and Reservoir, a multipurpose project financed by congressional appropriations, has been suspended due to budget restrictions and environmental concerns. Studies are being conducted to consider alternative uses of the land and facilities should the project not be completed.

5. Leases--Nuclear fuel is obtained directly from vendors and through contractual arrangements providing for mining, milling, and fabrication of raw materials obtained from land leased by TVA. Under an agreement entered into in 1980, TVA sells and leases back all nuclear fuel on hand except for that prior to the milling stage or in a spent condition. TVA leases property, plant, and equipment under lease agreements with terms ranging from one to thirty years. Under most of the agreements, TVA pays the property taxes, maintenance costs, and other costs of operation. Many of the agreements are the result of sale-leaseback arrangements. Most of the agreements include purchase options and/or renewal options which cover substantially all the economic lives of the properties.

Capital leases have been reported on the balance sheet and statements of changes in financial position while related rental expenses continue to be recorded in accordance with the ratemaking process as provided by Financial Accounting Standards No. 71, Accounting for the Effects of Certain Types of Regulation. The following analyses pertain to capital and noncancelable lease agreements in effect at September 30, 1987 and 1986:

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CAPITAL LEASES

	September 30	
	1987	1986
	(Thousands)	
Nuclear fuel	\$1,830,914	\$1,843,198
General plant	260,706	254,806
Total properties under capital leases	2,091,620	2,098,004
Accumulated provision for amortization of capital leases	13,400	11,457
Net properties under capital leases	<u>\$2,078,220</u>	<u>\$2,086,547</u>
Obligations under capital leases	<u>\$2,078,220^a</u>	<u>\$2,086,547</u>

FUTURE MINIMUM LEASE PAYMENTS

Fiscal Period	Capital Leases ^b		Noncancelable Operating Leases
	(Thousands)		
1988	\$ 37,655		\$ 6,161
1989	38,933		5,639
1990	38,933		5,264
1991	38,933		4,520
1992	38,933		4,463
Thereafter	<u>672,033</u>		<u>12,338</u>
Total future minimum lease payments	865,420		<u>\$38,385</u>
Less interest element included	<u>618,114</u>		
Present value of future minimum lease payments	<u>\$247,306</u>		

- a. Includes payments due in 1988 of \$2.031 million, excluding nuclear fuel.
b. Excludes payments under nuclear fuel lease, which are based on the cost of nuclear fuel burned and financial charge.

Amortization of capital leases, including nuclear fuel (1985 only), for the years ended September 30, 1987, 1986, and 1985 was \$1,943,000, \$1,786,000, and \$107,730,000, respectively. Operating expenses for the same respective years included finance charges for capital leases in the amounts of \$45,376,000, \$27,678,000, and \$36,531,000.

Annual rents for one capital lease range from \$2.7 million to \$51.9 million under the lease terms now in effect. TVA is providing for the levelization of these rentals in its operating expenses over the twenty-five year term of the lease. The accumulated balance of the provision for these lease payments is \$38,342,000 at September 30, 1987.

Rentals for all operating leases have been charged to clearing accounts, portions of which are charged to operations, for the years ended September 30, 1987, 1986, and 1985, in the amounts of \$8,434,000, \$8,383,000, and \$9,501,000, respectively.

6. Investment funds—TVA has made investments of power funds beginning in 1982 to provide for the accumulation of funds required for retirement of bonds and cost of decommissioning nuclear plants. Deposits into the funds have been made based upon annual calculations of the fund requirements considering rates of return, inflation, and projections of decommissioning costs. As of September 30, 1984, the existing portfolio of investments, including amounts previously invested in the bond retirement fund, was dedicated to the decommissioning fund as a prudent financial management decision based upon projected decommissioning fund needs and the ability of the portfolio to meet them. Additional investments for the decommissioning fund will be determined in accordance with the factors above for existing and new generating units. The fund balance at September 30, 1987, is \$207,698,000.

The bond retirement investment fund, beginning in October 1984, is being funded through deposits calculated to yield adequate funds to retire \$4.6 billion of debt in 2002. The deposits are being made over a period of 11 years coinciding with the amortization schedule for canceled plant costs. The fund balance at September 30, 1987, is \$502,901,000.

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7. Appropriation investment--Changes in the appropriation investment during the years ended September 30, 1987 and 1986 were as follows:

	Power program		All programs	
	1987	1986	1987	1986
(Thousands)				
Congressional appropriations and transfers of property from other Federal agencies (net)	\$ 33	\$ 206	\$ 100,008	\$ 101,748
Less repayments to General Fund of the U.S. Treasury	20,000	20,000	20,158	20,142
Increase or decrease for the period	(19,967)	(19,794)	79,850	81,606
Balance, beginning of period	808,282	828,076	3,775,582	3,693,976
Balance, end of period	\$788,315	\$808,282	\$3,855,432	\$3,775,582

8. Power production--Purchased and interchange power costs increased from approximately \$72 million in 1985 to \$242 million in 1986 and \$285 million in 1987 due to the continued low rainfall experienced in the region and the continued shutdown of the nuclear generating units. Operations and maintenance expenses for the nonoperating nuclear plants increased from \$189 million in 1985 to \$265 million in 1986 and \$377 million in 1987. Approximately \$3.6 billion in long-term commitments have been entered into for the purchase of coal to provide for the fuel requirements of the steam generating plants.

9. Payments to the U.S. Treasury--Section 15d of the TVA Act requires the payment from net power proceeds of a return on the net appropriation investment in power facilities plus repayments of such investment, beginning with fiscal year 1961. The amount of return payable during each year is based on the appropriation investment as of the beginning of that year and the computed average interest rate payable by the U.S. Treasury on its total marketable public obligations as of the same date. The repayment schedule calls for payment of not less than \$10 million for each of the first five years (1961-1965), \$15 million for each of the next five years (1966-1970), and \$20 million for each year thereafter until a total of \$1 billion shall have been repaid. The payments required by Section 15d may be deferred under certain circumstances for not more than two years.

Required payments have been made as follows:

	Return	Repayment	Total
(Thousands)			
Total to September 30, 1986	\$1,690,828	\$450,000	\$2,140,828
Year ended September 30, 1987	74,306	20,000	94,306
	\$1,765,134	\$470,000	\$2,235,134

For fiscal year 1988 the required payments will be \$68,544,000 as a return on the appropriation investment at the computed average interest rate of 8.695 percent, and \$20,000,000 as a repayment, a total of \$88,544,000.

In addition to the payments from net power proceeds, certain nonpower proceeds are paid to the U.S. Treasury under the provisions of Section 26 of the TVA Act. During fiscal year 1987, payments of \$157,268 were made, bringing the total payments from nonpower proceeds to \$42,116,000.

Prior to 1961, under then existing legislation, TVA paid to the Treasury \$185,059,000 of power proceeds. In addition to the repayments indicated in Exhibit I, \$65,072,000 of bonds sold to the Treasury and Reconstruction Finance Corporation in fiscal years 1939-1941 have been fully repaid from power proceeds. Section 26 of the TVA Act provides for annual payments to the Treasury of any power or nonpower proceeds not needed for the operation of dams and reservoirs, the conduct of the power program, and the manufacture and distribution of fertilizers.

10. Borrowing authority--Section 15d of the TVA Act authorizes TVA to issue bonds, notes, and other evidences of indebtedness up to a total of \$30 billion outstanding at any one time to assist in financing its power program. Debt service on these obligations, which is payable solely from TVA's net power proceeds, has precedence over the payment to the U.S. Treasury described in note 9. Issues outstanding on September 30, 1987, consist of the following:

Financial Statements

Long-term debt		(Thousands)
Held by the public		
5.70%	1967 Series A, due May 15, 1992	\$ 70,000
6-3/8%	1967 Series B, due November 1, 1992	60,000
7.30%	1971 Series B, due October 1, 1996	150,000
7%	1972 Series A, due January 1, 1997	150,000
7.35%	1972 Series B, due May 1, 1997	150,000
7.35%	1972 Series C, due July 1, 1997	150,000
7.40%	1972 Series D, due October 1, 1997	150,000
7.35%	1973 Series A, due January 1, 1998	100,000
7.35%	1973 Series B, due April 1, 1998	150,000
7-3/4%	1973 Series C, due July 1, 1998	150,000
7.70%	1973 Series D, due October 1, 1998	100,000
		<u>1,380,000</u>
Federal Financing Bank		
7.97%	1976 Series B, due November 30, 2001	400,000
7.625%	1976 Series C, due January 31, 2002	200,000
7.975%	1977 Series A, due February 28, 2002	300,000
7.935%	1977 Series B, due May 31, 2002	400,000
8%	1977 Series C, due October 31, 2002	400,000
8.375%	1978 Series A, due January 31, 2003	400,000
9.296%	1979 Series A, due February 28, 1989	500,000
9.195%	1979 Series C, due August 31, 2004	500,000
10.545%	1979 Series D, due October 31, 2004	400,000
11.225%	1980 Series A, due January 31, 2005	500,000
12.955%	1980 Series B, due March 31, 2005	500,000
10.475%	1980 Series C, due June 30, 2005	500,000
10.890%	1980 Series D, due August 31, 2005	500,000
12.425%	1980 Series E, due November 30, 2005	500,000
12.735%	1981 Series A, due March 31, 2011	500,000
12.925%	1981 Series B, due April 30, 2011	500,000
13.255%	1981 Series C, due June 30, 2011	500,000
14.905%	1981 Series D, due September 30, 2011	300,000
13.035%	1981 Series E, due December 31, 2011	650,000
13.565%	1982 Series A, due April 30, 2012	700,000
13.575%	1982 Series B, due May 31, 2012	300,000
14.125%	1982 Series C, due July 31, 2012	350,000
11.945%	1982 Series D, due September 30, 2012	100,000
10.725%	1982 Series E, due November 30, 2012	200,000
10.575%	1983 Series A, due January 31, 2013	150,000
10.575%	1983 Series B, due March 31, 2013	150,000
10.425%	1983 Series C, due May 31, 2013	100,000
11.685%	1983 Series D, due August 31, 2013	250,000
11.905%	1983 Series E, due January 31, 2014	150,000
12.055%	1984 Series A, due January 31, 2014	100,000
11.695%	1985 Series A, due January 31, 2015	100,000
12.095%	1985 Series B, due March 31, 2015	150,000
10.945%	1985 Series C, due May 31, 2015	150,000
10.725%	1985 Series D, due July 31, 2015	500,000
10.705%	1985 Series E, due September 30, 2015	200,000
9.685%	1986 Series A, due February 29, 2016	150,000
7.285%	1986 Series B, due April 30, 2016	600,000
7.825%	1986 Series C, due June 30, 2016	600,000
7.315%	1986 Series D, due August 31, 2016	900,000
7.765%	1986 Series E, due September 30, 2016	175,000
7.575%	1986 Series F, due November 30, 2016	200,000
7.495%	1987 Series A, due January 31, 2017	200,000
7.935%	1987 Series B, due April 30, 2017	200,000
8.755%	1987 Series C, due November 17, 2003	500,000
8.945%	1987 Series D, due February 17, 2003	200,000
9.565%	1987 Series E, due May 15, 2003	300,000
		<u>16,125,000</u>
	Total long-term debt	<u>17,505,000</u>
Short-term debt		
U.S. Treasury		150,000
Federal Financing Bank		<u>261,000</u>
	Total short-term debt	<u>411,000</u>
		<u>\$17,916,000</u>

Financial Statements

The interest rate on short-term debt owed to U.S. Treasury as of September 30, 1987, was 6.25 percent and the average rate on short-term debt outstanding with the Federal Financing Bank as of September 30, 1987, was 7.05 percent.

During fiscal years 1987, 1986, and 1985, the maximum amounts of short-term borrowings outstanding were \$1,076,000,000, \$930,000,000, and \$1,155,000,000, respectively, and the average amounts (and weighted average interest rates) of such borrowings were approximately \$669,000,000 (5.9 percent), \$628,000,000 (7.0 percent), and \$944,000,000 (8.4 percent), respectively.

11. Retirement plan—TVA has a contributory retirement plan which covers substantially all of its salaried employees. The cost of currently accruing benefits is funded currently. The cost of the plan to TVA, including amortization of unfunded prior service costs over the average future careers of active members, was \$86,064,000 in 1987, \$78,178,000 in 1986, and \$76,437,000 in 1985. These costs are charged to all TVA activities in relation to direct labor charges.

The valuation information as of September 30, 1986 and 1985, the latest actuarial valuation dates, follows:

	1986	1985
Assumed rate of return used in determining actuarial present value of accumulated plan benefits	8.5%	8.5%
Actuarial present value of accumulated plan benefits (thousands)		
Vested	\$1,176,275	\$1,050,893
Nonvested	59,377	57,026
	<u>\$1,235,652</u>	<u>\$1,107,919</u>
Net assets at market value available for benefits (thousands)	<u>\$1,898,812</u>	<u>\$1,561,016</u>

12. Nuclear insurance—Under the Price Anderson Act of 1954, as amended (the Act), TVA maintains for each operating nuclear plant a two-layer combination of private insurance and industry-wide self-insurance which protects TVA up to the Act's current maximum aggregate liability of \$715 million per nuclear incident. This protection covers liability for bodily injury, death, and loss of or damage to property located off the plant site. The first layer is private insurance, with a current maximum amount available of \$160 million. The second layer, presently \$555 million, is a program of self-insurance in which each nuclear reactor owner could be retrospectively assessed, for each of its operational nuclear units, an amount not to exceed \$5 million per each nuclear incident, and not to exceed \$10 million per year in the event of more than one nuclear incident in a year. Any amount in excess of \$10 million in any year would be carried forward until fully paid. Based on the number of operating nuclear units presently in service, TVA would be subject to a maximum assessment of \$25 million in the event of a single incident and \$50 million in any calendar year.

TVA is a member of Nuclear Mutual Limited (NML) which provides nuclear property insurance for the Browns Ferry Nuclear Plant for losses up to \$500 million. This insurance may require the payment of a retrospective premium of up to approximately \$37 million in the event that losses by NML members exceed its available funds. Property insurance up to \$500 million is also maintained for the Sequoyah Nuclear Plant, but is not subject to retrospective assessments.

TVA is also a member of Nuclear Electric Insurance Limited (NEIL), which provides nuclear property insurance for property damage to member nuclear plants in excess of \$500 million. TVA presently insures all of its operating nuclear plants with NEIL for \$575 million and is subject to a maximum assessment of approximately \$19 million in the event losses by NEIL members exceed its available funds.

13. Major customers—Sales of electric power to one Federal agency—principally in the form of demand charges—amounted to 10 percent, 10 percent, and 11 percent in fiscal years 1987, 1986, and 1985, respectively. This customer, in accordance with contract provisions, has exercised its right prior to fiscal year 1987, through notices eight years in advance, to reduce the amount of electric power to be purchased by 1000 megawatts each year beginning in December 1989, until reaching a contract demand of 485 megawatts from December 1992 until contract expiration in 1994. The reductions in demand have been taken into account in TVA's future supply plans. In June 1987 the customer began withholding payments of portions of its monthly power bills due to TVA. As of September 30, 1987, \$64 million of such amounts due but uncollected from the customer are included in revenues and fully provided for in expenses. The resolution of litigation on this matter is discussed in note 14.

Financial Statements

14. Litigation--The DDT suits mentioned last year, which involved the United States and Olin Corporation and in which TVA had been granted summary judgment, have been settled and dismissed by the other parties.

TVA employees are specifically subject to the Federal Employees' Compensation Act with respect to on-the-job injuries. That statute has an exclusive remedy provision, which injured employees often attempt to avoid by bringing suit against a coworker for allegedly negligently causing the injury. Since TVA has an administrative policy of defending its employees, at TVA's own cost, against suits brought against them for actions or omissions taken in the course of employment, and paying any resulting judgments, such suits can lead to double recovery against TVA, a result which the statute prohibits. A growing number of such suits have been brought in recent years. TVA has tried to limit their impact in a number of ways, including the waiver of such suits as a condition for TVA's defense of work-related suits, and the aggressive defense of sued employees on various legal grounds. The courts have been reaching differing conclusions on the different issues raised, and no single definitive decision has been issued. In most of the cases which have gone to final judgment, TVA has prevailed either on the law or the facts, and TVA anticipates that it will be successful in similar cases of this type in the future. Several cases involving TVA employees are pending in the Eleventh Circuit Court of Appeals and the United States District Court for the Northern District of Alabama.

The Department of Energy (DOE) has contracts with TVA, which terminate in 1994, for power supply to DOE's uranium enrichment and other facilities at Oak Ridge, Tennessee, and Paducah, Kentucky. DOE has substantially reduced its power use in recent years and in June 1987 informed TVA that DOE would reduce the level of its payments until, for October 1987 and thereafter, it would only pay 50 percent of the payments due (at the June 1987 rate level) for power capacity not being used. After TVA filed suit, DOE and TVA resolved the matter in December 1987 by agreement whereby DOE, among other things, is satisfying its payment obligations each year for such power through a series of payments totaling over \$1.8 billion. This includes scheduled payments over the remaining contract term of \$375,000,000 in fiscal 1988, \$465,000,000 in fiscal 1989, \$311,000,000 in fiscal 1990, and \$160,000,000 each year from 1991 through 1994. Furthermore, through the contract term, TVA will not be obligated to deliver more than 125 megawatts of power, which will be paid for by DOE in addition to the above payments.

As a result of an investigation into alleged illegal drug use by employees at the Sequoyah Nuclear Plant, TVA administered "for cause" drug tests to a number of those employees. Of those tested, 58 percent showed positive test results. A number of the tested employees (both positive and negative, and one who refused to be tested, together with the union representing some of the employees) sued the TVA supervisors and investigative agents involved for damages for claimed violation of various constitutional rights growing out of the testing. Following a four-day trial, the Federal district court dismissed all of the plaintiffs' claims, holding that there had been no constitutional violations, and that defendants had acted properly in all respects. The plaintiffs have filed an appeal to the United States Court of Appeals for the Sixth Circuit.

A contractor has filed suit against TVA asserting claims for around \$30 million arising from construction of the Chattanooga Office Complex.

Another contractor has sued several companies and individuals, including the Manager of Nuclear Power, on a number of contract-related theories, claiming \$88 million in damages. Although TVA is not a party, TVA has contracted to defend and indemnify the defendants for such suits, and is defending the case.

Shortly before the close of the fiscal year, a former employee sued TVA, the Board, the Inspector General, and an attorney working for the Board, alleging that a legal opinion released to the public by TVA defamed him and violated various claimed statutory, common law, and constitutional rights. The employee had been the Executive Secretary and a member of the Board of Directors of the TVA Retirement System. The suit seeks \$7 million in damages.

It is the opinion of TVA counsel that, although the outcome of this and other litigation involving TVA cannot be predicted with any certainty, the ultimate outcome should not have any material adverse effect on TVA's financial position.

Supplemental Schedules

Schedule A—Completed Plant

SEPTEMBER 30, 1987

SCHEDULE A
PAGE 1

	Assets	Accumulated depreciation and depletion
Power		
Multipurpose dams		
System allocation; page 23	\$ 474,748,126	\$ 226,364,465
Project allocations; page 25	88,806,750	18,950,653
Single-purpose dams; page 27	400,290,446	86,183,111
Steam production plants; page 27	4,190,141,917	1,694,755,978
Nuclear production plants; page 28	3,022,453,059	670,077,702
Other electric plant; page 28	3,033,569,510	1,011,254,040
Total power	<u>11,210,009,808</u>	<u>3,707,585,949</u>
Navigation		
Multipurpose dams		
System allocation; page 23	373,831,303	83,377,179
Project allocations; page 25	84,839,835	12,770,585
Total navigation	<u>458,671,138</u>	<u>96,147,764</u>
Flood control		
Multipurpose dams		
System allocation; page 23	187,378,805	51,411,629
Project allocations; page 25	67,795,942	4,423,138
Single-purpose flood control plant; page 29	2,065,257	298,179
Total flood control	<u>257,240,004</u>	<u>56,132,946</u>
Recreation and environmental education		
Multipurpose dams		
Project allocations; page 25	120,856,469	8,103,091
Land Between The Lakes; page 29	80,602,520	12,298,571
Other recreation plant; page 29	8,942,511	1,598,700
Total recreation and environmental education	<u>210,401,500</u>	<u>22,000,362</u>
Local economic development		
Multipurpose dams		
Project allocations; page 25	44,039,393	4,052,151
Chemical; page 29	108,890,928	47,945,727
General; page 29	171,729,898	26,845,577
Total	<u>\$12,460,982,669</u>	<u>\$3,960,710,476</u>
Total completed plant		
Multipurpose dams		
System allocation	\$ 1,035,958,234	\$ 361,153,273
Project allocations	406,338,389	48,299,618
Total multipurpose dams	<u>1,442,296,623</u>	<u>409,452,891</u>
Single-purpose dams	400,290,446	86,183,111
Steam production plants	4,190,141,917	1,694,755,978
Nuclear production plants	3,022,453,059	670,077,702
Other electric plant	3,033,569,510	1,011,254,040
Other plant	372,231,114	88,986,754
Total	<u>\$12,460,982,669</u>	<u>\$3,960,710,476</u>

Supplemental Schedules

Schedule A—Multipurpose Dams System Allocation

SEPTEMBER 30, 1987

	<u>Assets</u>			
	<u>Kentucky</u>	<u>Pickwick</u>	<u>Wilson</u>	<u>Wheeler</u>
Multiple-use facilities				
Reservoir land and landrights	\$ 14,634,175	\$ 2,792,005	\$ 682,816	\$ 4,321,809
Highway, railroad, and other relocations and removals	27,434,261	2,631,526	136,355	2,113,711
Reservoir clearing	6,915,483	1,509,836	951,436	3,613,759
Dam structure, excluding power intake section	27,595,304	10,010,763	17,044,485	8,384,889
Roadways	276,831	500,361	2,116,796	901,410
Village and reservoir facilities	2,525,600	480,816	550,940	1,567,627
Other structures and improvements	1,616,233	3,285,538	1,312,330	650,370
Total	80,997,887	21,210,845	22,795,158	21,553,575
Deduct direct flood control investment, contra below	16,532,000	788,000	-	-
Add nonoverflow sections to replace other sections, contra below				
Power intake section	2,890,000	550,000	3,900,000	830,000
Lock section	210,000	380,000	125,000	200,000
Total multiple-use facilities, allocated below; note 2, page 9	67,565,887	21,352,845	26,820,158	22,583,575
Navigation facilities				
Lock and appurtenances	10,108,811	124,257,562	28,626,219	21,727,974
Channel improvements	-	-	-	-
Deduct nonoverflow section to replace lock section, contra above	210,000	380,000	125,000	200,000
Total before allocation of multiple-use facilities	9,898,811	123,877,562	28,501,219	21,527,974
Add allocation of total multiple-use facilities shown above; note 2, page 9				
Total navigation facilities after allocation				
Flood control facilities				
Reservoir land and landrights	-	-	-	-
Add direct flood control investment, contra above	16,532,000	788,000	-	-
Total before allocation of multiple-use facilities	16,532,000	788,000	-	-
Add allocation of total multiple-use facilities shown above; note 2, page 9				
Total flood control facilities after allocation				
Power facilities				
Powerhouse, including intake section	10,853,547	9,494,311	22,517,229	18,164,734
Turbines and generators	10,607,618	13,426,938	30,587,685	24,200,470
Accessory electric equipment	1,595,583	1,778,809	7,939,909	3,005,233
Other power plant equipment	1,009,006	554,844	2,350,855	687,587
Total	24,065,754	25,254,902	63,395,678	46,058,024
Deduct nonoverflow section to replace power intake section, contra above	2,890,000	550,000	3,900,000	830,000
Total before allocation of multiple-use facilities	21,175,754	24,704,902	59,495,678	45,228,024
Add allocation of total multiple-use facilities shown above; note 2, page 9				
Total power facilities after allocation				
Total	\$115,172,452	\$170,723,309	\$114,817,055	\$89,339,573
Accumulated depreciation	\$ 37,056,702	\$ 27,975,458	\$ 55,758,309	\$36,505,037

Supplemental Schedules

<u>Guntersville</u>	<u>Chickamauga</u>	<u>Watts Bar</u>	<u>Fort Loudoun</u>	<u>Morris</u>	<u>Hiwassee</u>	<u>Cherokee</u>	<u>Chatuge</u>
\$ 3,651,842	\$ 4,426,249	\$ 4,884,588	\$ 3,950,748	\$ 6,787,100	\$ 1,678,482	\$ 4,494,115	\$ 948,707
3,867,303	2,704,136	4,977,205	5,111,630	4,308,463	1,191,433	5,519,525	2,801,496
2,436,597	971,651	953,785	560,341	1,561,458	394,601	575,359	194,329
5,146,272	8,242,856	4,035,158	8,880,957	11,498,748	9,391,491	13,597,164	4,523,438
366,029	165,767	70,281	259,733	266,690	246,236	31,728	38,234
1,389,085	593,431	388,652	404,154	279,564	183,072	235,676	12,862
923,568	1,125,103	1,066,094	851,363	656,399	245,428	951,537	463,432
17,780,696	18,229,193	16,375,763	20,018,926	25,358,422	13,330,743	25,405,104	8,982,498
-	1,107,000	1,952,000	786,000	5,506,000	1,356,000	3,467,000	537,000
780,000	1,470,000	614,000	1,610,000	-	-	-	-
440,000	790,000	565,000	940,000	-	-	-	-
19,000,696	19,382,193	15,602,763	21,782,926	19,852,422	11,974,743	21,938,104	8,445,498
17,747,558	5,298,611	3,161,200	5,709,247	-	-	-	-
-	-	-	-	-	-	-	-
440,000	790,000	565,000	940,000	-	-	-	-
17,307,558	4,508,611	2,596,200	4,769,247	-	-	-	-
-	-	-	-	1,318,284	-	-	-
-	1,107,000	1,952,000	786,000	5,506,000	1,356,000	3,467,000	537,000
-	1,107,000	1,952,000	786,000	6,824,284	1,356,000	3,467,000	537,000
5,696,982	6,384,183	4,991,201	6,257,916	2,304,628	2,574,032	3,263,593	511,137
7,826,275	7,889,619	8,052,837	6,887,367	2,122,440	5,333,470	6,512,598	1,049,966
910,628	3,151,798	2,086,468	1,576,279	3,161,115	787,735	2,115,729	188,325
594,968	626,675	858,001	645,641	312,399	541,355	568,362	135,470
15,028,853	18,052,275	15,988,507	15,367,203	7,900,582	9,236,592	12,460,282	1,884,898
780,000	1,470,000	614,000	1,610,000	-	-	-	-
14,248,853	16,582,275	15,374,507	13,757,203	7,900,582	9,236,592	12,460,282	1,884,898
\$50,557,107	\$41,580,079	\$35,525,470	\$41,095,376	\$34,577,288	\$22,567,335	\$37,865,386	\$10,867,396
\$19,913,184	\$18,806,478	\$16,214,036	\$18,187,776	\$11,537,572	\$11,811,389	\$14,053,963	\$ 2,936,375

Supplemental Schedules

SEPTEMBER 30, 1987

Multiple-use facilities

Reservoir land and landrights
Highway, railroad, and other relocations and removals
Reservoir clearing
Dam structure, excluding power intake section
Roadways
Village and reservoir facilities
Other structures and improvements

Total

Deduct direct flood control investment, contra below
Add nonoverflow sections to replace other sections,
contra below

Power intake section

Lock section

Total multiple-use facilities, allocated below;
note 2, page 9

Navigation facilities

Lock and appurtenances

Channel improvements

Deduct nonoverflow section to replace lock section,
contra above

Total before allocation of multiple-use facilities

Add allocation of total multiple-use facilities shown
above; note 2, page 9

Total navigation facilities after allocation

Flood control facilities

Reservoir land and landrights

Add direct flood control investment, contra above

Total before allocation of multiple-use facilities

Add allocation of total multiple-use facilities shown
above; note 2, page 9

Total flood control facilities after allocation

Power facilities

Powerhouse, including intake section

Turbines and generators

Accessory electric equipment

Other power plant equipment

Total

Deduct nonoverflow section to replace power intake
section, contra above

Total before allocation of multiple-use facilities

Add allocation of total multiple-use facilities shown
above; note 2, page 9

Total power facilities after allocation

Total

Accumulated depreciation

Supplemental Schedules

**SCHEDULE A
PAGE 2**

Assets						Channel improvements	Total system allocation dams	Accumulated depreciation
Nottely	Fontana	South Holston	Watauga	Douglas	Boone			
\$ 413,407	\$ 1,625,351	\$ 2,424,289	\$ 4,598,632	\$ 6,786,680	\$ 2,116,530	\$ -	\$ 71,217,525	\$ -
1,344,854	9,017,018	3,745,948	6,369,316	8,107,311	2,724,632	-	94,106,123	-
232,107	1,033,436	892,864	385,808	574,900	575,423	-	24,333,173	-
3,205,913	45,779,373	17,411,137	11,396,184	19,523,667	7,771,491	-	233,439,290	107,423,390
197,851	606,244	211,319	341,593	82,469	24,164	-	6,703,736	3,680,026
13,185	120,917	95,069	230,010	334,167	122,037	-	9,526,864	4,248,157
112,908	3,334,155	1,007,203	926,542	1,109,244	380,586	-	20,018,033	10,640,236
5,520,225	61,516,494	25,787,829	24,248,085	36,518,438	13,714,863	-	459,344,744	125,991,809
623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	55,439,000	13,980,046
-	-	-	-	-	1,160,000	-	13,804,000	6,966,238
-	-	-	-	-	-	-	3,650,000	1,769,042
<u>4,897,225</u>	<u>53,893,494</u>	<u>20,837,829</u>	<u>21,203,085</u>	<u>29,461,438</u>	<u>14,764,863</u>	<u>-</u>	<u>\$ 421,359,744</u>	<u>\$120,747,043</u>
-	-	-	-	-	-	-	\$ 216,637,182	\$ 43,413,534
-	-	-	-	-	-	47,076,990	47,076,990	9,130,985
-	-	-	-	-	-	-	3,650,000	1,769,042
-	-	-	-	-	-	47,076,990	260,064,172	50,775,477
-	-	-	-	-	-	-	113,767,131	32,601,702
-	-	-	-	-	-	-	373,831,303	83,377,179
-	-	-	-	-	-	-	1,318,284	-
623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	55,439,000	13,980,046
<u>623,000</u>	<u>7,623,000</u>	<u>4,950,000</u>	<u>3,045,000</u>	<u>7,057,000</u>	<u>110,000</u>	<u>-</u>	<u>56,757,284</u>	<u>13,980,046</u>
-	-	-	-	-	-	-	130,621,521	37,431,583
-	-	-	-	-	-	-	187,378,805	51,411,629
605,926	5,684,649	2,793,345	4,933,907	4,769,550	4,742,968	-	116,543,838	57,019,345
1,283,429	6,997,739	1,945,181	2,600,466	6,393,017	5,151,132	-	148,868,247	99,806,528
209,452	1,280,776	573,947	951,259	2,223,288	1,116,973	-	34,653,306	17,942,870
145,250	635,312	264,971	425,128	563,833	595,986	-	11,515,643	7,848,202
2,244,057	14,598,476	5,577,444	8,910,760	13,949,688	11,607,059	-	311,581,034	182,616,945
-	-	-	-	-	1,160,000	-	13,804,000	6,966,238
<u>2,244,057</u>	<u>14,598,476</u>	<u>5,577,444</u>	<u>8,910,760</u>	<u>13,949,688</u>	<u>10,447,059</u>	<u>-</u>	<u>297,777,034</u>	<u>175,650,707</u>
-	-	-	-	-	-	-	176,971,092	50,713,758
-	-	-	-	-	-	-	474,748,126	226,364,465
<u>\$7,764,282</u>	<u>\$76,114,970</u>	<u>\$31,365,273</u>	<u>\$33,158,845</u>	<u>\$50,468,126</u>	<u>\$25,321,922</u>	<u>\$47,076,990</u>	<u>\$1,035,958,234</u>	
<u>\$3,059,590</u>	<u>\$31,652,956</u>	<u>\$10,236,476</u>	<u>\$10,222,355</u>	<u>\$16,743,645</u>	<u>\$ 9,350,987</u>	<u>\$ 9,130,985</u>		<u>\$361,153,273</u>

Supplemental Schedules

Schedule A—Multipurpose Dams Project Allocations

SEPTEMBER 30, 1987

	Melton Hill	Wickajack
Multiple-use facilities		
Reservoir land and landrights; note	\$ 1,865,742	\$ 3,274,631
Highway, railroad, and other relocations and removals	2,667,366	9,106,970
Reservoir clearing	904,168	736,361
Dam structure, excluding power intake section	3,304,666	9,998,809
Roadways	419,618	499,660
Village and reservoir facilities	215,055	413,686
Other structures and improvements	1,229,436	1,228,611
Total	10,606,051	25,258,728
Deduct direct power investment, contra below	2,138,725	-
Deduct direct flood control investment, contra below	-	-
Add nonoverflow sections to replace other sections, contra below	-	-
Power intake section	1,120,000	700,000
Lock section	480,000	950,000
Add sluiceway to replace power intake and water conductor, contra below	-	-
Total multiple-use facilities, allocated below; note 2, page 9	\$10,067,326	\$26,908,728
Navigation facilities		
Lock and appurtenances	\$ 9,458,833	\$21,423,792
Channel improvements	-	-
Deduct nonoverflow section to replace lock section, contra above	480,000	950,000
Total before allocation of multiple-use facilities	8,978,833	20,473,792
Add allocation of total multiple-use facilities shown above; note 2, page 9	6,543,762	22,887,302
Total navigation facilities after allocation	15,522,595	43,361,094
Flood control facilities		
Reservoir land and landrights	-	-
Structures and improvements	-	-
Dam structures and waterways	-	-
Reservoir facilities	-	-
Channel improvements	-	-
Total	-	-
Add direct flood control investment, contra above	-	-
Total before allocation of multiple-use facilities	-	-
Add allocation of total multiple-use facilities shown above; note 2, page 9	-	402,684
Total flood control facilities after allocation	-	402,684
Local economic development facilities		
Water supply	-	-
Add allocation of total multiple-use facilities shown above; note 2, page 9	-	-
Less reimbursement by local agencies	-	-
Total local economic development facilities after allocation and reimbursements	-	-
Recreation facilities		
Land and landrights	-	-
Other recreation plant	-	-
Add allocation of total multiple-use facilities shown above; note 2, page 9	-	-
Total recreation facilities after allocation	-	-
Power facilities		
Land and landrights	-	-
Powerhouse, including intake section	6,275,274	11,978,693
Turbines and generators	6,727,752	13,017,372
Accessory electrical equipment	851,797	1,581,615
Other power plant equipment	567,461	793,693
Total	14,422,284	27,371,373
Add direct power investment, contra above	2,138,725	-
Deduct nonoverflow section to replace power intake section, contra above	1,120,000	700,000
Deduct sluiceway to replace power intake and water conductor, contra above	-	-
Total before allocation of multiple-use facilities	15,441,009	26,671,373
Add allocation of total multiple-use facilities shown above; note 2, page 9	3,523,564	3,618,742
Total power facilities after allocation	18,964,573	30,290,115
Total	\$34,487,168	\$74,053,893
Accumulated depreciation	\$ 9,787,712	\$16,964,412

Note:

Wickajack includes land and landrights in the amount of \$1,298,981 acquired for retired Hales Bar project which is allocated on system basis.

Supplemental Schedules

SCHEDULE A
PAGE 3

Assets						Total project allocations dams	Accumulated depreciation
Tellico	Tims Ford	Bear Creek	Duck River	Beech River	Channel improvements		
\$ 23,143,118	\$ 8,131,142	\$12,993,004	\$ 5,561,053	\$2,089,256	\$ -	\$ 57,057,946	\$ -
51,348,905	12,363,625	7,880,885	11,148,941	222,931	-	94,739,623	-
5,357,147	3,057,250	4,237,323	512,541	953,369	-	15,758,159	-
30,042,982	14,244,947	38,269,639	18,541,607	2,943,715	-	117,346,365	15,347,742
9,705,490	352,345	1,731,810	-	80,600	-	12,789,523	1,868,938
10,731,170	84,142	595,924	655,974	268,253	-	12,964,204	1,780,789
1,954,965	1,192,083	1,042,164	170,016	66,595	-	6,883,870	1,769,266
132,283,777	39,425,534	66,750,749	36,590,132	6,624,719	-	317,539,690	20,766,735
-	-	-	-	-	-	2,138,725	233,922
-	-	5,707,000	-	-	-	5,707,000	246,382
-	-	-	-	-	-	1,820,000	397,481
-	-	-	-	-	-	1,430,000	297,642
-	4,273,000	-	-	-	-	4,273,000	793,788
<u>\$132,283,777</u>	<u>\$43,698,534</u>	<u>\$61,043,749</u>	<u>\$36,590,132</u>	<u>\$6,624,719</u>	<u>\$ -</u>	<u>\$317,216,965</u>	<u>\$21,775,342</u>
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,882,625	\$ 7,682,897
-	-	-	-	-	2,145,066	2,145,066	565,314
-	-	-	-	-	-	1,430,000	297,642
-	-	-	-	-	2,145,066	31,597,691	7,950,569
23,811,080	-	-	-	-	-	53,242,144	4,820,016
<u>23,811,080</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2,145,066</u>	<u>84,839,835</u>	<u>12,770,585</u>
-	-	-	-	386,655	-	386,655	-
-	-	-	-	10,021	-	10,021	5,553
-	-	-	-	114,479	-	114,479	25,698
-	-	-	-	1,839	-	1,839	409
-	-	-	-	2,386,478	-	2,386,478	529,910
-	-	-	-	2,899,472	-	2,899,472	561,570
-	-	5,707,000	-	-	-	5,707,000	246,382
-	5,707,000	-	-	2,899,472	-	8,606,472	807,952
26,456,755	6,991,766	20,754,874	2,927,211	1,656,180	-	59,189,470	3,615,186
<u>26,456,755</u>	<u>6,991,766</u>	<u>26,461,874</u>	<u>2,927,211</u>	<u>4,555,652</u>	<u>-</u>	<u>67,795,942</u>	<u>4,423,138</u>
-	-	124,660	-	19,445	-	144,105	19,818
6,614,189	9,613,677	8,546,125	23,051,783	4,968,539	-	52,794,313	4,032,333
-	3,000,000	-	5,700,000	199,025	-	8,899,025	-
<u>6,614,189</u>	<u>6,613,677</u>	<u>8,670,785</u>	<u>17,351,783</u>	<u>4,788,959</u>	<u>-</u>	<u>44,039,393</u>	<u>4,052,151</u>
-	12,175	937,863	-	-	-	950,038	-
2,880,810	282,761	1,138,133	1,157,500	-	-	5,459,204	1,004,805
47,622,160	24,471,179	31,742,750	10,611,138	-	-	114,447,227	7,098,286
<u>50,502,970</u>	<u>24,766,115</u>	<u>33,818,746</u>	<u>11,768,638</u>	<u>-</u>	<u>-</u>	<u>120,856,469</u>	<u>8,103,091</u>
-	971,562	-	-	-	-	971,562	-
-	7,233,822	-	-	-	-	25,487,789	6,020,257
-	3,501,720	-	-	-	-	23,246,844	9,644,757
-	974,733	-	-	-	-	3,408,145	1,206,229
-	741,720	-	-	-	-	2,102,874	827,236
-	13,423,557	-	-	-	-	55,217,214	17,698,479
-	-	-	-	-	-	2,138,725	233,922
-	-	-	-	-	-	1,820,000	397,481
-	4,273,000	-	-	-	-	4,273,000	793,788
-	9,150,557	-	-	-	-	51,262,939	16,741,132
27,779,593	2,621,912	-	-	-	-	37,543,811	2,209,521
<u>27,779,593</u>	<u>11,772,469</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>88,806,750</u>	<u>18,950,653</u>
<u>\$135,164,587</u>	<u>\$50,144,027</u>	<u>\$68,951,405</u>	<u>\$32,047,632</u>	<u>\$9,344,611</u>	<u>\$2,145,066</u>	<u>\$406,338,389</u>	<u>\$48,299,618</u>
<u>\$ 5,191,109</u>	<u>\$ 6,068,925</u>	<u>\$ 5,331,869</u>	<u>\$ 3,041,253</u>	<u>\$1,349,024</u>	<u>\$ 565,314</u>		

Supplemental Schedules

Schedule A—Single-Purpose Power Dams and Steam Production Plants

SEPTEMBER 30, 1987

	<u>Raccoon Mountain</u>	<u>Apalachia</u>	<u>Fort Patrick Henry</u>	<u>Great Falls</u>	<u>Ocoee No. 3</u>
Single-purpose power dams					
Assets					
Reservoir land and landrights, including relocations	\$ 2,457,772	\$ 775,306	\$ 1,194,718	\$ 702,114	\$ 237,226
Reservoir clearing	1,463,481	72,151	126,855	216,056	28,702
Structures and improvements	70,074,107	1,316,070	1,899,609	371,416	695,678
Dams and waterways	121,151,756	17,151,527	4,565,200	2,386,338	5,615,903
Turbines and generators	63,484,702	2,700,097	3,052,738	749,700	1,026,760
Accessory electric equipment	18,700,510	649,102	644,186	436,154	368,566
Other power plant equipment	5,385,421	296,716	275,700	140,213	190,804
Roads, railroads, and bridges	2,096,216	371,808	20,462	22,431	377,029
Village and reservoir facilities	2,642,144	-	35,169	5,877,009	-
Total single-purpose power dams	<u>\$287,456,109</u>	<u>\$ 23,332,777</u>	<u>\$ 11,814,637</u>	<u>\$ 10,901,431</u>	<u>\$ 8,540,668</u>
Accumulated depreciation	<u>\$ 48,556,706</u>	<u>\$ 11,848,350</u>	<u>\$ 5,534,665</u>	<u>\$ 5,078,761</u>	<u>\$ 4,544,574</u>
Steam production plants					
Assets					
Land and landrights	\$ 1,829,568	\$ 2,599,996	\$ 996,934	\$ 504,507	\$ 2,330,813
Structures and improvements	93,490,219	85,180,640	47,743,233	51,977,777	40,665,121
Boiler plant equipment	457,762,161	633,292,663	296,264,121	188,186,511	177,885,141
Turbogenerators	72,525,426	129,628,441	77,785,104	81,941,186	66,817,482
Accessory electric equipment	49,287,390	37,382,325	33,698,528	20,257,616	15,838,257
Other power plant equipment	11,957,542	14,205,243	10,235,305	7,635,586	6,380,673
Total steam production plants	<u>\$686,852,306</u>	<u>\$902,289,308</u>	<u>\$466,723,225</u>	<u>\$350,503,183</u>	<u>\$309,917,487</u>
Accumulated depreciation	<u>\$188,603,865</u>	<u>\$204,108,905</u>	<u>\$209,870,819</u>	<u>\$203,527,950</u>	<u>\$179,902,681</u>

Supplemental Schedules

**SCHEDULE A
PAGE 4**

<u>Ocoee No. 2</u>	<u>Blue Ridge</u>	<u>Ocoee No. 1</u>	<u>Wilbur</u>	<u>Total</u>
\$ 20,252	\$ 1,572,134	\$ 230,409	\$ 33,717	\$ 7,223,648
-	125,636	29,686	2,610	2,065,177
333,499	1,613,243	243,337	401,997	76,948,956
26,262,213	12,564,467	7,991,181	1,008,485	198,697,070
452,352	542,534	330,295	740,191	73,079,369
165,663	512,783	230,176	184,257	21,891,397
199,478	1,300,023	137,710	84,437	8,010,502
13,387	851,894	6,550	1,913	3,761,690
-	40,802	10,897	6,616	8,612,637
<u>\$ 27,446,844</u>	<u>\$ 19,123,516</u>	<u>\$ 9,210,241</u>	<u>\$ 2,464,223</u>	<u>\$ 400,290,446</u>
<u>\$ 2,480,121</u>	<u>\$ 3,483,801</u>	<u>\$ 3,152,507</u>	<u>\$ 1,503,626</u>	<u>\$ 86,183,111</u>

<u>Johnsonville</u>	<u>Colbert</u>	<u>Gallatin</u>	<u>Bull Run</u>	<u>John Sevier</u>	<u>Watts Bar</u>	<u>Thomas H. Allen</u>	<u>Total</u>
\$ 108,467	\$ 279,029	\$ 690,082	\$ 2,220,883	\$ 1,491,572	\$ 11,997	\$ 142,024	\$ 13,205,872
42,437,683	35,375,579	31,309,512	30,021,266	23,044,609	4,847,638	37,104,203	523,197,480
185,865,428	170,686,487	158,327,989	148,099,732	80,709,230	10,526,863	84,007,413	2,591,613,739
57,571,049	72,615,392	49,278,277	30,358,469	33,528,500	6,289,636	51,548,643	729,887,605
23,527,393	24,285,489	12,320,177	15,865,465	9,074,991	1,803,202	7,266,073	250,608,906
<u>5,568,533</u>	<u>5,276,453</u>	<u>6,242,507</u>	<u>4,657,819</u>	<u>4,225,342</u>	<u>820,495</u>	<u>4,422,817</u>	<u>81,628,315</u>
<u>\$315,078,553</u>	<u>\$308,518,429</u>	<u>\$258,168,544</u>	<u>\$231,223,634</u>	<u>\$152,074,244</u>	<u>\$24,301,831</u>	<u>\$184,491,173</u>	<u>\$4,190,141,917</u>
<u>\$151,437,061</u>	<u>\$129,908,969</u>	<u>\$101,696,796</u>	<u>\$ 84,300,294</u>	<u>\$ 80,852,548</u>	<u>\$24,227,395</u>	<u>\$136,318,695</u>	<u>\$1,694,755,978</u>

Supplemental Schedules

Schedule A—Nuclear Production and Other Electric Plant

SCHEDULE A			
PAGE 5			
SEPTEMBER 30, 1987			
	Browns Ferry	Sequoyah	Total
Nuclear production plants			
Assets			
Land and landrights	\$ 940,631	\$ 3,184,030	\$ 4,124,661
Structures and improvements	269,424,185	453,170,388	722,594,573
Reactor plant equipment	468,760,310	793,911,206	1,262,671,516
Turbogenerators	258,527,892	290,820,140	549,348,032
Accessory electric equipment	137,966,597	235,173,215	373,139,812
Other power plant equipment	39,908,869	70,665,596	110,574,465
Total nuclear production plants	<u>\$1,175,528,484</u>	<u>\$1,846,924,575</u>	<u>\$3,022,453,059</u>
Accumulated depreciation	<u>\$ 341,506,918</u>	<u>\$ 328,570,784</u>	<u>\$ 670,077,702</u>
		Assets	Accumulated depreciation and depletion
Other electric plant			
Other production plant			
Gallatin gas turbines		\$ 30,433,790	
Thomas H. Allen gas turbines		52,885,558	
Colbert gas turbines		43,614,394	
Johnsonville gas turbines		86,809,108	
		213,742,850	\$ 107,737,168
System control and training center		53,561,550	13,244,959
Total other production plant		<u>267,304,400</u>	<u>120,982,127</u>
Transmission plant, including substations serving wholesale and industrial customers			
Land and landrights		87,631,445	
Structures and improvements		178,611,318	
Station equipment		779,013,734	
Towers and fixtures		332,759,109	
Poles and fixtures		90,171,320	
Overhead conductors and devices		408,589,096	
Total transmission plant		<u>1,876,776,022</u>	<u>628,323,242</u>
General plant			
Communication equipment		89,438,477	33,373,528
Coal land and landrights and mining equipment		213,908,024	3,630,813
Office and transportation equipment		220,906,624	53,580,272
Other, including land and landrights of \$1,521,824		<u>116,948,821</u>	<u>53,750,203</u>
Total general plant		<u>641,201,946</u>	<u>144,334,816</u>
Plant leased to others, including land and landrights of \$12,869,732		<u>214,552,426</u>	<u>108,126,959</u>
Plant held for future use			
Coal land and landrights		159,219	
Other, including land and landrights of \$24,439,656		<u>29,339,740</u>	
Total plant held for future use		<u>29,498,959</u>	<u>6,471,306</u>
Other physical property, including land and landrights of \$1,220,168		<u>4,235,757</u>	<u>3,015,590</u>
Total other electric plant		<u>\$3,033,569,510</u>	<u>\$1,011,254,040</u>

Schedule A—Other Plant

SEPTEMBER 30, 1987

SCHEDULE A
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	Assets	Accumulated depreciation and depletion
Single-purpose flood control plant, including land of \$726,828	\$ 2,065,257	\$ 298,179
Recreation and environmental education plant		
Land Between The Lakes plant, including land of \$33,888,959	80,602,520	12,298,571
Other recreation plant, including land of \$795,987	8,942,511	1,598,700
Total recreation and environmental education plant	89,545,031	13,897,271
Chemical plant		
Land		
Phosphate land and mineral rights	469,569	
Other land and landrights	2,120	
Total land	471,689	17,010
Buildings and equipment		
Manufacturing plant and equipment		
Nitrogen facilities	69,709,596	28,067,159
General service facilities		
Utility systems	22,948,569	
Other general facilities	15,761,074	
	38,709,643	19,861,558
Total buildings and equipment	108,419,239	47,928,717
Total chemical plant	108,890,928	47,945,727
General plant		
Land and landrights	591,715	
Land improvements	2,292,351	
Coal gasification	114,623,986	
Structures	22,642,606	
General utility systems	2,359,851	
Data processing equipment	448,510	
Engineering equipment	988,142	
Photographic and reproduction equipment	1,819,062	
Medical equipment	1,650,996	
Office furniture and equipment	2,055,424	
Transportation equipment	11,924,940	
Alterations to leased plant	1,259,726	
Environmental quality equipment	2,309,803	
Miscellaneous equipment	6,762,786	
Total general plant	171,729,898	26,845,577
Total other plant	\$372,231,114	\$88,986,754

Supplemental Schedules

Schedule B—Construction in Progress, Nuclear Fuel, and Other Deferred Charges

SCHEDULE B

SEPTEMBER 30, 1987

	<u>Power program</u>	<u>All programs</u>
CONSTRUCTION IN PROGRESS		
Construction in progress		
Generating facilities		
Watts Bar Nuclear Plant	\$4,658,944,784	\$4,658,944,784
Bellefonte Nuclear Plant--Unit One and common costs	3,213,840,260	3,213,840,260
Total generating facilities	<u>7,872,785,044</u>	<u>7,872,785,044</u>
Additions and modifications to nuclear facilities	<u>529,532,677</u>	<u>529,532,677</u>
Transmission lines, substations, and other additions to power facilities	<u>334,749,193</u>	<u>334,749,193</u>
Other navigation facilities		<u>3,192,356</u>
Multipurpose facilities		
Columbia Dam and Reservoir	-	81,101,280
Other	4,010,436	10,585,249
Total multipurpose facilities	<u>4,010,436</u>	<u>91,686,529</u>
Chemical plant		<u>7,072,006</u>
Recreation and environmental education facilities		
Land Between The Lakes		373,287
Other recreation facilities		234,202
Total recreation and environmental education facilities		<u>607,489</u>
General plant		
General construction equipment and materials	-	2,181,381
Other additions to general plant	35,916,138	39,562,514
Total general plant	<u>35,916,138</u>	<u>41,743,895</u>
Total construction in progress	<u>\$8,776,993,488</u>	<u>\$8,881,369,189</u>
 DEFERRED NUCLEAR GENERATING UNIT		
Bellefonte Nuclear Plant--Unit Two	<u>\$ 793,072,000</u>	<u>\$ 793,072,000</u>
 NUCLEAR FUEL		
Nuclear fuel in process	\$ 26,760,738	\$ 26,760,738
Nuclear fuel in stock	19,040,684	19,040,684
Nuclear fuel in reactor	539,351,545	539,351,545
Spent nuclear fuel in cooling	<u>289,415,560</u>	<u>289,415,560</u>
	874,568,527	874,568,527
Less accumulated amortization	<u>670,151,023</u>	<u>670,151,023</u>
Nuclear fuel, net	<u>\$ 204,417,504</u>	<u>\$ 204,417,504</u>
 OTHER DEFERRED CHARGES		
Recoverable operating costs and other deferred charges	<u>\$ 63,503,418</u>	<u>\$ 63,503,418</u>
Mine and mill development costs		
Coal mine development and leases	75,713,825	75,713,825
Uranium mine and mill development and preoperations	<u>70,665,675</u>	<u>70,665,675</u>
Total mine and mill development costs	<u>146,379,500</u>	<u>146,379,500</u>
Total other deferred charges	<u>\$ 209,882,918</u>	<u>\$ 209,882,918</u>

Supplemental Schedules

Schedule C—Details of Power Expense

SCHEDULE C
PAGE 1

FOR THE YEAR ENDED SEPTEMBER 30, 1987

SUMMARY	Total	Provision for depreciation	Total before depreciation (exhibit 11)	Operation			
				Fuel	Other	Maintenance	Other
Production							
Multipurpose dams							
Direct, page 32	\$ 22,511,815	\$ 6,102,053	\$ 16,409,762	\$ -	\$ 9,323,744	\$ 7,084,016	\$ -
Multiple use, schedule E	9,471,521	1,629,040	7,842,481	-	6,057,907	1,784,554	-
Single purpose dams and pumped storage, page 34	15,998,363	7,563,821	8,434,542	-	4,330,769	4,103,773	-
Cumberland Basin projects, note a	16,729,736	-	16,729,736	-	-	-	16,729,736
Steam plants, page 36	1,515,101,543	125,074,829	1,390,026,714	1,150,588,352	94,839,730	144,493,632	-
Nuclear plants, page 38	491,509,517	103,599,140	387,910,377	10,451,378	249,486,524	127,972,473	-
Gas turbine plants, page 38	11,493,452	8,549,710	2,943,742	1,804,985	154,075	984,683	-
Total generation	2,082,816,148	252,523,613	1,830,292,535	1,162,844,715	364,292,753	286,425,331	16,729,736
Purchased power	10,552,568	-	10,552,568	-	-	-	10,552,568
Interchange power received	267,958,852	-	267,958,852	-	-	-	267,958,852
Interchange power delivered	(13,944,034)	-	(13,944,034)	-	-	-	(13,944,034)
Power purchased and interchanged, net	284,567,386	-	284,567,386	-	-	-	284,567,386
System control and load dispatching	9,001,980	1,456,697	7,545,283	-	-	-	7,545,283
Other	19,823,124	-	19,823,124	-	-	-	19,823,124
Total production	2,396,208,638	254,180,310	2,142,028,328	1,162,844,715	364,292,753	286,425,331	328,465,529
Transmission, page 38	52,675,359	45,855,692	6,819,667	-	-	-	18,663,651
Customer accounts, page 39	64,847,905	-	64,847,905	-	-	-	64,847,905
Power consumer services, page 39	75,866,748	-	75,866,748	-	-	-	75,866,748
Demonstration of power use, page 39	45,060,022	-	45,060,022	-	-	-	45,060,022
Research, development, and demonstrations, page 39	54,914,841	-	54,914,841	-	-	-	54,914,841
Payments in lieu of taxes, note b	203,117,124	-	203,117,124	-	-	-	203,117,124
Loss on canceled nuclear plants	31,750,422	-	31,750,422	-	-	-	31,750,422
Administrative and general, page 39							
Direct	335,376,694	13,698,068	321,678,626	-	320,750,583	928,043	-
Multiple use	194,847	-	194,847	-	-	-	194,847
Total operating expense	\$3,300,012,400	\$313,734,070	\$2,986,278,330	\$1,162,844,715	\$364,083,515	\$306,017,025	\$563,699,453

SYSTEM STATISTICS	kWh generated less station use (thousands)	Production expense including depreciation		Installed capacity at September 30, 1987 (kilowatts)	Ratio of average gross generation to installed capacity (percent)
		Total	Per kWh (mills)		
Generation					
Multipurpose dams					
Direct, page 32	12,018,815	\$ 22,511,815	1.873	3,095,250	44.85
Multiple use, schedule E	9,471,521	9,471,521	.788	-	-
Total multipurpose dams	12,018,815	31,983,336	2.661	3,095,250	44.85
Single purpose dams, page 34	1,002,543	6,489,076	6.473	249,160	46.10
Pumped storage, Raccoon Mountain, page 35	(480,050)	9,509,287	5.507	1,530,000	13.00
Cumberland Basin projects, note a	2,342,102	16,729,736	7.143	853,000	11.64
TAPOCO, note c	1,200,584	-	-	326,500	42.08
Total hydro generation	16,083,994	-	-	4,053,910	14.83
Steam plants, page 36	78,631,620	1,515,101,543	19.268	17,647,360	54.25
Nuclear plants, page 38	(212,689)	491,509,517	5.897	5,897,160	13.00
Gas turbine plants, page 38	29,639	11,493,452	387.788	2,510,000	20
Total generation, note d	94,532,564	331,791	-	32,108,430	35.13
Purchased power	831,791	10,552,568	-	-	-
Interchange power received	24,478,185	267,958,852	-	-	-
System control and load dispatching	-	9,001,980	-	-	-
Wheeling received, note e	665,428	-	-	-	-
Other	-	19,823,124	-	-	-
Total system input	121,007,968	-	-	-	-
Delivered under Alcoa Agreement	(1,620,600)	-	-	-	-
Interchange power delivered	(9,854,604)	(13,944,034)	-	-	-
Wheeling delivered, note e	(652,180)	-	-	-	-
Net energy supply	108,880,384	2,396,208,638	22.008	-	-
Shop and internal uses	(12,724)	-	-	-	-
Transmission and transformation losses	(927,758)	-	-	-	-
Total kWh sales and production expense	107,939,902	\$2,396,208,638	22.200	-	-

Notes:

- TVA purchases substantially all of the output of eight hydro plants in the Cumberland River Basin in accordance with memorandums of understanding with the Corps of Engineers, Department of the Army, the Cumberland Basin projects are operated for optimum production of power in conjunction with TVA's power system, subject to flood control, navigation, and other operating requirements of the Army.
- Payments made to states and counties in which power operations are carried out. The basic amount is 5 percent of gross revenues from the sale of power to other than Federal agencies during the preceding year, with the provision of minimum payments under certain circumstances.
- Operation of twelve hydro plants of the Aluminum Company of America is coordinated with the operation of TVA's power plants under an arrangement whereby the storage and release of water from the Alcoa plants is carried out by the company under TVA's direction. Under contract effective January 1, 1983, only four TAPOCO plants provide generation with eight Mantahala plants excluded.
- Installed capacity increased 19,540 kilowatts during the fiscal year 1987. Additions were from modifications of five generators and the addition of one new generator.
- TVA transmits (wheels) power and energy through its system for transactions from Southeastern Power Authority to Mississippi Power and Light, Big Rivers EDC, East Kentucky Power Cooperative, Southern Illinois Power Cooperative, and Carolina Power and Light Company. Wheeling losses for fiscal year 1987 totaled 13,048,000 kilowatthours.

Supplemental Schedules

FOR THE YEAR ENDED SEPTEMBER 30, 1987

	Total	Kentucky	Pickwick	Wilson	Wheeler	Guntersville	Wickesjack	Chickamauga
Direct hydraulic production - multipurpose dams								
Operation								
Supervision and engineering	\$ 1,494,250	\$ 98,131	\$ 134,700	\$ 223,610	\$ 158,210	\$ 86,223	\$ 49,199	\$ 66,182
Hydraulic	34,311	-	6,728	12,797	11,839	1,384	-	-
Electric	4,521,400	268,951	291,308	741,802	441,182	286,071	152,262	258,008
Miscellaneous	3,273,785	201,513	190,703	656,394	258,783	182,007	84,731	212,307
Total operation	9,323,746	568,595	623,439	1,634,603	870,014	555,685	286,192	536,497
Maintenance								
Supervision and engineering	568,074	46,907	45,781	162,150	40,293	51,904	21,842	25,010
Structures	642,573	47,996	35,783	159,517	38,061	30,346	7,525	11,829
Reservoirs, dams, and waterways	616,388	20,102	65,035	182,483	15,702	10,154	11,771	17,731
Electric plant	4,077,648	80,677	154,347	705,875	541,693	108,627	45,974	266,884
Miscellaneous plant	1,181,333	80,507	91,572	275,738	78,581	55,466	48,028	85,150
Total maintenance	7,086,016	276,189	392,518	1,485,763	714,330	256,497	135,140	406,604
Provision for depreciation	6,102,053	358,418	427,430	1,062,975	767,972	251,427	447,300	296,334
Total	\$22,511,815	\$1,203,202	\$1,443,387	\$4,183,341	\$2,352,316	\$1,063,609	\$868,632	\$1,239,435
kWh generated less station use (thousands)	12,018,815	1,025,527	1,130,980	2,341,630	1,194,997	687,836	618,537	719,477
Total production expense including depreciation per kWh (mills)	1.873	1.173	1.276	1.787	1.968	1.546	1.404	1.723
Installed capacity at September 30, 1987 (kilowatts)	3,098,590	175,000	244,280	629,840	378,000	115,200	103,950	120,000
Ratio of average gross generation to installed capacity (percent)	44.70	67.07	55.23	42.60	36.40	68.41	68.06	68.77

Supplemental Schedules

SCHEDULE C
PAGE 2

Watts Bar	Fort Loudoun	Morris	Hivasssee	Cherokee	Chatuge	Mottely	Fontana	South Holston	Watauga	Douglas	Boone	Nelton Hill	Time Ford
\$ 86,413	\$ 62,953	\$ 50,259	\$ 74,917	\$ 70,645	\$ 9,723	\$ 10,804	\$ 83,378	\$ 20,748	\$ 37,542	\$ 91,741	\$ 31,813	\$ 28,587	\$ 18,472
1,255	-	-	-	-	-	-	-	-	110	-	198	-	-
323,622	229,897	151,743	107,382	128,596	28,031	40,899	173,689	99,508	229,901	136,140	217,024	112,867	102,517
174,492	200,679	107,153	142,941	230,965	23,408	26,988	128,701	27,970	143,915	113,502	53,743	68,473	44,417
585,782	493,529	309,155	325,240	430,206	61,162	78,691	385,748	148,226	411,468	341,383	302,778	209,927	165,406
16,612	22,834	17,665	3,970	16,706	3,159	2,900	20,910	11,377	15,715	14,425	8,807	13,270	5,837
48,676	24,486	12,502	20,115	51,720	8,288	4,742	58,122	6,852	12,093	47,086	13,059	2,823	952
98,892	17,765	6,143	5,521	66,619	4,536	4,940	39,600	7,856	13,929	4,315	3,553	18,227	1,514
217,108	857,437	70,503	76,952	125,132	4,455	17,230	452,698	64,791	78,113	113,053	29,451	56,896	9,752
83,570	63,528	35,310	30,878	54,295	2,627	7,272	64,027	12,274	24,920	43,597	18,175	10,467	15,351
464,858	986,050	142,123	137,436	314,472	23,065	37,084	635,357	103,150	144,770	222,476	73,045	101,683	33,406
285,456	251,027	146,773	170,079	231,172	33,950	41,046	259,012	94,297	143,590	246,197	188,007	240,325	159,266
<u>\$1,336,096</u>	<u>\$1,730,606</u>	<u>\$598,051</u>	<u>\$632,755</u>	<u>\$975,850</u>	<u>\$118,177</u>	<u>\$156,821</u>	<u>\$1,280,137</u>	<u>\$345,673</u>	<u>\$699,828</u>	<u>\$810,056</u>	<u>\$563,830</u>	<u>\$551,935</u>	<u>\$358,078</u>
841,899	739,246	423,349	183,266	353,800	20,230	22,101	684,115	165,304	144,800	333,975	192,884	143,183	51,679
1,587	2,341	1,413	3,453	2,758	5,842	7,096	1,871	2,091	4,833	2,425	2,923	3,855	6,929
166,500	139,140	100,800	117,100	135,180	10,000	15,000	238,500	38,500	57,600	120,600	76,400	72,000	45,000
57.89	60.83	48.09	24.36	30.13	23.37	17.03	32.84	49.25	28.91	31.86	29.10	22.88	13.15

Supplemental Schedules

FOR THE YEAR ENDED SEPTEMBER 30, 1987

	<u>Total</u>	<u>Apalachia</u>	<u>Fort Patrick Henry</u>
Hydraulic production - single purpose dams and pumped storage			
Operation			
Supervision and engineering	\$ 265,369	\$ 56,511	\$ 24,322
Hydraulic	127,818	277	77,271
Electric	1,227,540	107,200	105,739
Miscellaneous	<u>684,059</u>	<u>56,373</u>	<u>201,544</u>
Total operation	<u>2,304,786</u>	<u>220,361</u>	<u>408,876</u>
Maintenance			
Supervision and engineering	88,126	4,614	14,252
Structures	184,281	6,134	12,048
Reservoirs, dams, and waterways	1,587,192	161,013	180,481
Electric plant	258,606	69,754	15,595
Miscellaneous plant	<u>173,993</u>	<u>35,661</u>	<u>15,165</u>
Total maintenance	<u>2,292,198</u>	<u>277,176</u>	<u>237,541</u>
Provision for depreciation	<u>1,892,092</u>	<u>284,479</u>	<u>163,212</u>
Total	<u>\$6,489,076</u>	<u>\$782,016</u>	<u>\$809,629</u>
kWh generated less station use (thousands)	1,002,543	380,628	106,255
Total production expense including depreciation per kWh (mills)	6.473	2.055	7.620
Installed capacity at September 30, 1987 (kilowatts)	249,160	82,800	36,000
Ratio of average gross generation to installed capacity (percent)	46.10	52.58	33.98

a. Excludes kWh used in pumping.

Supplemental Schedules

SCHEDULE C
PAGE 3

Single Purpose Dams						Raccoon Mountain
Great Falls	Ocoee No. 3	Ocoee No. 2	Blue Ridge	Ocoee No. 1	Wilbur	
\$ 37,017	\$ 66,939	\$ 22,528	\$ 11,233	\$ 37,488	\$ 9,331	\$ 489,508
21,119	3,868	13,500		1,198	10,585	443
358,392	67,435	156,371	39,719	350,893	41,791	564,985
65,700	54,292	94,315	46,216	142,610	23,009	971,047
<u>482,228</u>	<u>192,534</u>	<u>286,714</u>	<u>97,168</u>	<u>532,189</u>	<u>84,716</u>	<u>2,025,983</u>
13,781	8,299	23,214	4,391	11,154	8,421	102,801
35,200	2,259	99,714	3,693	23,931	1,302	136,832
405,788	308,223	249,206	245,362	28,382	8,737	81,166
45,418	14,262	24,454	12,784	36,346	39,993	1,301,648
<u>25,738</u>	<u>15,830</u>	<u>46,827</u>	<u>10,113</u>	<u>21,142</u>	<u>3,517</u>	<u>189,128</u>
<u>525,925</u>	<u>348,873</u>	<u>443,415</u>	<u>276,343</u>	<u>120,955</u>	<u>61,970</u>	<u>1,811,575</u>
<u>181,121</u>	<u>110,580</u>	<u>540,089</u>	<u>364,198</u>	<u>208,253</u>	<u>40,160</u>	<u>5,671,729</u>
<u>\$1,189,274</u>	<u>\$651,987</u>	<u>\$1,270,218</u>	<u>\$737,709</u>	<u>\$861,397</u>	<u>\$186,846</u>	<u>\$9,509,287</u>
138,658	161,869	92,566	34,005	62,084	26,478	(480,050)
8,577	4,028	13,722	21,694	13,875	7,057	5,458 ^a
31,860	28,800	21,000	20,000	18,000	10,700	1,530,000
49.91	64.32	50.47	19.51	39.58	28.48	13.00

Supplemental Schedules

FOR THE YEAR ENDED SEPTEMBER 30, 1987

	<u>Total</u>	<u>Cumberland</u>	<u>Paradise</u>	<u>Widows Creek</u>	<u>Shawnee</u>
Steam production					
Operation					
Supervision and engineering	\$ 21,086,168	\$ 2,678,829	\$ 2,813,848	\$ 2,201,989	\$ 1,934,982
Fuel	1,150,588,352	194,789,529	147,131,446	83,177,740	85,657,842
Steam	32,673,911	2,683,434	6,548,502	5,115,888	3,278,318
Electric	11,564,874	820,435	1,137,981	1,272,468	1,316,455
Miscellaneous	<u>29,614,777</u>	<u>4,237,097</u>	<u>3,833,937</u>	<u>4,076,510</u>	<u>2,510,190</u>
Total operation	<u>1,245,528,082</u>	<u>205,209,324</u>	<u>161,465,714</u>	<u>95,844,595</u>	<u>94,697,787</u>
Maintenance					
Supervision and engineering	8,655,081	1,435,047	1,215,923	800,500	692,953
Structures	7,853,803	858,751	775,068	936,032	853,164
Boiler plant	89,748,639	10,974,602	14,047,071	12,416,297	6,450,996
Electric plant	32,178,063	4,148,856	3,895,689	1,923,386	6,002,231
Miscellaneous plant	<u>6,058,046</u>	<u>1,554,313</u>	<u>15,596</u>	<u>1,347,298</u>	<u>(813,344)</u>
Total maintenance	<u>144,493,632</u>	<u>18,971,569</u>	<u>19,949,347</u>	<u>17,423,513</u>	<u>13,186,000</u>
Provision for depreciation	<u>125,079,829</u>	<u>19,295,799</u>	<u>26,312,115</u>	<u>15,823,057</u>	<u>9,976,432</u>
Total	<u><u>\$1,515,101,543</u></u>	<u><u>\$243,476,692</u></u>	<u><u>\$207,727,176</u></u>	<u><u>\$129,091,165</u></u>	<u><u>\$117,860,219</u></u>
 kWh generated less station use (thousands)	 78,631,620	 14,046,154	 10,854,672	 5,572,794	 5,732,888
Total production expense including depreciation per kWh (mills)	19.268	17.334	19.137	23.165	20.559
Installed capacity at September 30, 1987 (kilowatts)	17,647,360	2,600,000	2,558,200	1,968,760	1,750,000
Ratio of average gross generation to installed capacity (percent)	54.25	64.58	52.30	34.56	40.49

Supplemental Schedules

SCHEDULE C
PAGE 4

<u>Kingston</u>	<u>Johnsonville</u>	<u>Colbert</u>	<u>Gallatin</u>	<u>Bull Run</u>	<u>John Sevier</u>	<u>Watts Bar</u>	<u>Thomas H. Allen</u>
\$ 1,832,866	\$ 1,837,686	\$ 1,602,570	\$ 1,642,847	\$ 1,375,787	\$ 1,610,622	\$ 44,888	\$ 1,509,254
126,496,867	78,723,597	148,929,925	87,143,061	85,666,549	62,649,013	-	50,222,783
3,045,504	3,072,088	2,762,117	1,912,672	1,306,268	1,586,941	3,143	1,359,036
1,417,041	1,413,756	1,254,247	907,595	700,904	780,312	18,417	525,263
<u>2,465,348</u>	<u>2,147,196</u>	<u>2,293,907</u>	<u>2,314,252</u>	<u>1,987,800</u>	<u>1,659,621</u>	<u>58,372</u>	<u>2,030,547</u>
<u>135,257,626</u>	<u>87,194,323</u>	<u>156,842,766</u>	<u>93,920,427</u>	<u>91,037,308</u>	<u>68,286,509</u>	<u>124,820</u>	<u>55,646,883</u>
697,629	644,111	413,905	649,160	565,159	1,135,000	10,260	395,434
454,505	775,769	1,068,919	328,052	457,584	717,336	6,057	622,566
7,710,760	6,190,192	6,081,292	8,081,591	6,499,520	3,753,842	41,350	7,501,126
2,202,613	3,331,163	1,582,662	3,843,025	1,792,101	1,660,506	421	1,795,410
<u>222,686</u>	<u>699,078</u>	<u>446,897</u>	<u>809,176</u>	<u>811,533</u>	<u>299,057</u>	<u>4,507</u>	<u>661,249</u>
<u>11,288,193</u>	<u>11,640,313</u>	<u>9,593,675</u>	<u>13,711,004</u>	<u>10,125,897</u>	<u>7,565,741</u>	<u>62,595</u>	<u>10,975,785</u>
<u>8,760,678</u>	<u>10,753,409</u>	<u>9,840,413</u>	<u>7,716,090</u>	<u>6,472,700</u>	<u>4,221,462</u>	<u>695,015</u>	<u>5,212,659</u>
<u>\$155,306,497</u>	<u>\$109,588,045</u>	<u>\$176,276,854</u>	<u>\$115,347,521</u>	<u>\$107,635,905</u>	<u>\$80,073,712</u>	<u>\$882,430</u>	<u>\$71,835,327</u>
9,479,742	5,522,070	7,841,785	5,935,131	4,755,737	5,052,444	(1,804)	3,840,007
16.383	19.845	22.479	19.435	22.633	15.849		18.707
1,700,000	1,485,200	1,350,000	1,255,200	950,000	800,000	240,000	990,000
68.10	46.52	70.14	57.55	59.34	76.36		47.96

Supplemental Schedules

SCHEDULE C
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FOR THE YEAR ENDED SEPTEMBER 30, 1987

	<u>Allen</u>	<u>Colbert</u>	<u>Gallatin</u>	<u>Johnsonville</u>	<u>Total</u>
Gas turbine production					
Fuel expense	\$ 305,379	\$ 544,572	\$ 339,468	\$ 615,566	\$ 1,804,985
Other operating expense	<u>77,272</u>	<u>45,824</u>	<u>9,665</u>	<u>21,314</u>	<u>154,075</u>
	382,651	590,396	349,133	636,880	1,959,060
Maintenance	423,898	171,225	138,469	251,291	984,883
Provision for depreciation	<u>2,115,423</u>	<u>1,744,571</u>	<u>1,217,352</u>	<u>3,472,364</u>	<u>8,549,710</u>
Total	<u>\$2,921,972</u>	<u>\$2,506,192</u>	<u>\$1,704,954</u>	<u>\$4,360,535</u>	<u>\$11,493,653</u>
kWh generated less station use (thousands)	3,652	12,913	5,992	7,082	29,639
Total production expense including depreciation per kWh (mills)	800.102	194.083	284.538	615.721	387.788
Installed capacity at September 30, 1987 (kilowatts)	620,800	476,000	325,200	1,088,000	2,510,000
Ratio of average gross generation to installed capacity (percent)	.12	.37	.29	.14	.20
		<u>Browns Ferry</u>	<u>Sequoyah</u>	<u>Total</u>	
Nuclear production					
Operation					
Supervision and engineering		\$ 78,166,586	\$ 84,867,579	\$163,034,165	
Fuel		9,200,879	1,250,499	10,451,378	
Coolants and water		395,023	1,565,916	1,960,939	
Steam		15,216,902	3,286,985	18,503,887	
Electric		4,360,930	1,055,119	5,416,049	
Miscellaneous		<u>25,755,491</u>	<u>38,815,995</u>	<u>64,571,486</u>	
Total operation		<u>133,095,811</u>	<u>126,842,093</u>	<u>259,937,904</u>	
Maintenance					
Supervision and engineering		25,897,399	41,961,469	67,858,868	
Structures		6,039,579	5,718,153	11,757,732	
Reactor plant		11,532,969	16,815,602	28,348,571	
Electric plant		5,346,445	5,895,248	11,241,693	
Miscellaneous plant		<u>5,950,155</u>	<u>2,815,454</u>	<u>8,765,609</u>	
Total maintenance		<u>54,766,547</u>	<u>73,205,926</u>	<u>127,972,473</u>	
Provision for depreciation		<u>42,220,066</u>	<u>61,379,074</u>	<u>103,599,140</u>	
Total		<u>\$230,082,424</u>	<u>\$261,427,093</u>	<u>\$491,509,517</u>	
kWh generated less station use (thousands)		(100,394)	(112,295)	(212,689)	
Installed capacity at September 30, 1987 (kilowatts)		3,456,000	2,441,160	5,897,160	
Transmission					
Operation					
Supervision and engineering				\$ 10,562,236	
Load dispatching				2,377,109	
Stations				4,092,493	
Overhead lines				1,264,218	
Transmission of electricity by others				88,738	
Miscellaneous				6,102,476	
Rents				<u>3,668,746</u>	
Total operation				<u>28,156,016</u>	
Maintenance					
Supervision and engineering				154,424	
Structures				947,953	
Station equipment				9,114,088	
Overhead lines				7,652,485	
Miscellaneous plant				<u>794,701</u>	
Total maintenance				<u>18,663,651</u>	
Total				<u>\$ 46,819,667</u>	

Supplemental Schedules

SCHEDULE C

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FOR THE YEAR ENDED SEPTEMBER 30, 1987

Customer accounts		
Meter reading	\$	369,588
Customer records and collections		914,409
Uncollectible accounts		63,563,908
Total	\$	<u>64,847,905</u>
Power consumer services		
Amortization - deferred conservation costs	\$	70,429,282
Cycle and save programs		1,464,826
Supervision and general		194,963
Loan loss expense		3,777,677
Total	\$	<u>75,866,748</u>
Demonstration of power use		
Amortization - deferred conservation costs	\$	35,876,718
Supervision and general		7,332,758
Commercial and industrial		1,386,060
Industrial marketing		1,185,775
		<u>45,781,311</u>
Less reimbursements from power distributors for technical advisory services		(721,289)
Total	\$	<u>45,060,022</u>
Research, development, and demonstrations		
Transmission	\$	4,739,609
Demonstration of power use		5,606,870
Administrative and general		12,442,813
Other		32,125,549
Total	\$	<u>54,914,841</u>
Administrative and general		
Direct		
Operation		
Salaries	\$38,479,873	
Office supplies and expenses	<u>30,496,317</u>	\$ 68,976,190
Less transfers to construction and other accounts		(36,845,795)
		<u>32,130,395</u>
Outside services employed		311,597
Property insurance		9,566,781
Injuries and damages		1,727,144
Employee pensions, benefits, and FICA		134,221,246
Property administration		11,322,308
Purchasing and other services		28,828,035
Miscellaneous		13,004,231
Rents		35,576,606
Electricity used by shops and laboratories		(630,010)
Total operation		<u>266,058,333</u>
Maintenance		
General property		928,043
Total direct		<u>266,986,376</u>
Allocation from nonpower divisions		
TVA general offices		
Direct; schedule F	54,692,250	
Multiple-use; schedule E	<u>194,647</u>	<u>54,886,897</u>
Total administrative and general charged to power operations		<u>\$321,873,273</u>

Schedule D—Details of Nonpower Net Expense

SCHEDULE D
PAGE 1

FOR THE YEAR ENDED SEPTEMBER 30, 1987

	Direct	Multiple-use (schedule E)	Total
NATURAL RESOURCES DEVELOPMENT			
Navigation operations			
Studies and investigations			
Navigation engineering and investigations	\$1,486,318	\$ -	\$ 1,486,318
General and administrative expenses	36,092	-	36,092
	<u>1,522,410</u>	<u>-</u>	<u>1,522,410</u>
Operation and maintenance of facilities			
Operation	-	4,426,933	4,426,933
Maintenance	-	1,207,506	1,207,506
General and administrative expenses	-	143,619	143,619
Provision for depreciation	3,526,905	1,252,391	4,779,296
	<u>3,526,905</u>	<u>1,252,391</u>	<u>4,779,296</u>
Total expense of navigation operations	<u>\$5,049,315</u>	<u>\$7,030,449</u>	<u>12,079,764</u>
System flood control operations			
Studies and investigations			
System studies and investigations	\$ 454,191	\$ -	454,191
General and administrative expenses	11,317	-	11,317
	<u>465,508</u>	<u>-</u>	<u>465,508</u>
Operation and maintenance of facilities			
Operation	-	6,057,907	6,057,907
Maintenance	-	1,495,577	1,495,577
General and administrative expenses	-	202,572	202,572
Provision for depreciation	380,409	1,410,543	1,790,952
	<u>380,409</u>	<u>1,410,543</u>	<u>1,790,952</u>
Total expense of system flood control operations	<u>\$ 845,917</u>	<u>\$9,166,599</u>	<u>10,012,516</u>
Recreation development			
Recreation development	\$1,607,514	\$ -	1,607,514
General and administrative expenses	20,364	-	20,364
	<u>1,627,878</u>	<u>-</u>	<u>1,627,878</u>
Operation and maintenance of facilities			
Operation and maintenance	-	6,603,663	6,603,663
General and administrative expenses	-	213,916	213,916
Provision for depreciation	378,517	702,879	1,081,396
	<u>378,517</u>	<u>702,879</u>	<u>1,081,396</u>
Total expense of recreation development	<u>\$2,006,395</u>	<u>\$7,520,458</u>	<u>9,526,853</u>
Economic projects and demonstrations			
Economic projects and demonstrations	\$4,350,446	\$ -	4,350,446
General and administrative expenses	96,148	-	96,148
	<u>4,446,594</u>	<u>-</u>	<u>4,446,594</u>
Operation and maintenance of facilities			
Operation and maintenance	-	764,810	764,810
General and administrative expenses	-	24,743	24,743
Provision for depreciation	1,852	337,009	338,861
	<u>1,852</u>	<u>337,009</u>	<u>338,861</u>
Total expense of economic projects and demonstrations	<u>\$4,448,446</u>	<u>\$1,126,562</u>	<u>5,575,008</u>
Regional water quality management			
Regional water quality management			4,145,447
Provision for depreciation			29,465
General and administrative expenses			100,655
			<u>4,275,567</u>
Total expense of regional water quality management			<u>4,275,567</u>
Fisheries and wildlife resources development			
Fisheries resources development			583,700
Wildlife resources development			813,214
Provision for depreciation			72,890
General and administrative expenses			33,919
			<u>1,503,723</u>
Total expense of fisheries and wildlife resources development			<u>1,503,723</u>

Supplemental Schedules

**SCHEDULE D
PAGE 2**

FOR THE YEAR ENDED SEPTEMBER 30, 1987

NATURAL RESOURCES DEVELOPMENT - continued	
Conservation of public lands and water	
Conservation of public lands and water	\$ 875,762
General and administrative expenses	<u>22,634</u>
Total expense of conservation of public lands and water	<u>898,396</u>
Environmental education	
Environmental education	507,288
Provision for depreciation	11,232
General and administrative expenses	<u>12,452</u>
Total expense of environmental education	<u>530,972</u>
Agricultural institute	
Developing jobs and income	688,921
Innovative research	977,025
Preserving farmland productivity	1,300,334
Market development	955,994
General and administrative expenses	<u>226,358</u>
Net expense of agricultural institute	<u>4,148,632</u>
Renewable fuels research	
Renewable fuels research	2,676,250
General and administrative expenses	<u>142,755</u>
Total expense of renewable fuels research	<u>2,819,005</u>
Forest resources development	
Forest resources development	1,735,839
Provision for depreciation	17,085
General and administrative expenses	<u>40,697</u>
Total expense of forest resources development	<u>1,793,621</u>
Acidic deposition	
Acidic deposition	360,243
General and administrative expenses	<u>9,047</u>
Total expense of acidic deposition	<u>369,290</u>
Industrial skills development	
Industrial skills development	3,118,658
General and administrative expenses	<u>47,506</u>
Total expense of industrial skills development	<u>3,166,164</u>
Waterway development and engineering assistance	
Waterway development and engineering assistance	3,845,326
General and administrative expenses	<u>26,007</u>
Total expense of waterway development and engineering assistance	<u>3,871,333</u>
Tennessee-Tombigbee waterway development	
Tennessee-Tombigbee waterway development	1,024,968
General and administrative expenses	<u>28,217</u>
Total expense of Tennessee-Tombigbee waterway development	<u>1,053,245</u>
Special opportunities cities and counties program	
Special opportunities cities and counties program	4,502,441
General and administrative expenses	<u>61,029</u>
Total expense of special opportunities cities and counties program	<u>4,563,470</u>

Supplemental Schedules

SCHEDULE D PAGE 3

FOR THE YEAR ENDED SEPTEMBER 30, 1987

NATURAL RESOURCES DEVELOPMENT - continued

Minority economic development	
Minority economic development	\$ 569,171
General and administrative expenses	<u>18,095</u>
Total expense of minority economic development	<u>587,266</u>
Floodplain management	
Floodplain management	1,865,207
Provision for depreciation	13,496
General and administrative expenses	<u>42,967</u>
Total expense of floodplain management	<u>1,921,670</u>
Waste management	
Waste management	1,929,934
General and administrative expenses	<u>38,459</u>
Total expense of waste management	<u>1,968,393</u>
Land Between The Lakes operations	
Land Between The Lakes operations	6,477,435
Provision for depreciation	1,188,338
General and administrative expenses	<u>199,248</u>
Total expense of Land Between The Lakes operations	<u>7,865,021</u>
Valley mapping and remote sensing	
Valley mapping and remote sensing	1,093,222
Provision for depreciation	22,967
General and administrative expenses	<u>23,769</u>
Total expense of Valley mapping and remote sensing	<u>1,139,958</u>
Economic technical assistance	
Economic technical assistance	998,718
General and administrative expenses	<u>19,229</u>
Total expense of economic technical assistance	<u>1,017,947</u>
Other natural resources development projects	
Regional air quality management	615,043
Bristol, Tennessee water project	(208,558)
General and administrative expenses	<u>15,825</u>
Total expense of other natural resources development projects	<u>422,310</u>
Total expense of natural resources development	<u>\$ 81,110,124</u>

FERTILIZER DEVELOPMENT

Research and development	
Chemical fertilizer research and development	\$ 11,220,726
Soils and fertilizer research	4,120,550
Development and operation of coal gasification	197,642
Provision for depreciation	35,115,443
General and administrative expenses	<u>950,087</u>
Total expense of research and development	<u>51,604,448</u>

Supplemental Schedules

SCHEDULE D

PAGE 4

FOR THE YEAR ENDED SEPTEMBER 30, 1987

FERTILIZER DEVELOPMENT - continued

Fertilizer technology development	
Fertilizer industry demonstrations	\$ 3,945,065
Farm test demonstrations outside the Valley	555,451
Product/process research testing	4,594,000
General and administrative expenses	<u>228,596</u>
Net expense of fertilizer introduction	<u>9,323,112</u>

Developmental production

Cost of products distributed	
Materials used	6,480,686
Direct manufacturing and shipping expense	13,101,506
Indirect manufacturing and shipping expense	4,033,554
Provision for depreciation and depletion	3,327,553
Finished inventory changes	<u>7,184,662</u>
Total cost of products distributed	<u>34,127,961</u>

General expenses

Corporate management and services	1,190,974
Provision for depreciation	1,129,444
Other	<u>(16,126,523)</u>
Total general expenses	<u>(13,806,105)</u>
Total production expense	<u>20,321,856</u>

Less transfers and sales of products

Transfers to TVA programs	12,016,774
Direct sales	<u>304,390</u>
Total transfers and sales	<u>12,321,164</u>

Net expense of developmental production 8,000,692

Net expense of fertilizer development \$ 68,928,252

OTHER EXPENSE OR INCOME

Regional management training and other miscellaneous expenses	\$ 77,984
Maintenance of bridges financed by others on TVA dams	694,348
Emergency preparedness	49,855
Energy demonstrations	3,507,928
Interest income from receivables	<u>(134,635)</u>

Other expense, net \$ 4,195,480

NET EXPENSE \$154,233,856

Supplemental Schedules

Schedule E—Operating Expenses of Multiple-Use Facilities

SCHEDULE E

FOR THE YEAR ENDED SEPTEMBER 30, 1987

Expenses

Operation

Water control operations	\$ 2,951,647
Water control investigations	1,921,587
Investigations and control of reservoir ecology	3,082,135
Reservoir lands planning	722,343
Reservoir release improvements	1,308,400
Plant protection and services to visitors	4,116,000
Operation and upkeep of dam reservations	3,505,560
Operation of reservoir lands	<u>5,691,972</u>

Total operation	23,299,644
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General and administrative expenses	779,497
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Maintenance	5,099,213
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Provision for depreciation	<u>5,331,882</u>
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Total	<u><u>\$34,510,236</u></u>
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	<u>Operation</u>	<u>General and administrative</u>	<u>Maintenance</u>	<u>Depreciation</u>	<u>Total</u>
Distributed to					
Power operations	\$ 6,057,907	\$194,647	\$1,784,554	\$1,629,060	\$ 9,666,168
Navigation operations	4,426,933	143,619	1,207,506	1,252,391	7,030,449
Flood control operations	6,057,907	202,572	1,495,577	1,410,543	9,166,599
Recreation development	6,290,904	213,916	312,759	702,879	7,520,458
Economic development and analysis	<u>465,993</u>	<u>24,743</u>	<u>298,817</u>	<u>337,009</u>	<u>1,126,562</u>
Total	<u><u>\$23,299,644</u></u>	<u><u>\$779,497</u></u>	<u><u>\$5,099,213</u></u>	<u><u>\$5,331,882</u></u>	<u><u>\$34,510,236</u></u>

Schedule F—General and Administrative Expenses

SCHEDULE F

FOR THE YEAR ENDED SEPTEMBER 30, 1987

Expenses

Board of directors	\$ 1,421,461
Office of the general manager	2,121,722
Office of policy, planning, and budget	3,532,253
Office of governmental and public affairs	6,626,140
Office of the inspector general	11,498,393
Office of employee relations	16,711,271
Division of the comptroller	21,142,075
Office of the general counsel	9,705,767
Environmental quality staff	2,368,146
Office of corporate services	72,993
Other general and administrative	5,895,711

Total

\$81,095,932

	Amount	Percent of total
Distributed to		
Construction in progress	\$21,153,421	26.08
Recovered through services billed to others	828,258	1.02
Expense of programs		
Power	54,692,250	67.44
Navigation	36,092	.04
Flood hazard analysis	11,317	.01
Conservation of public lands and water	22,634	.03
Regional water management	100,655	.12
Fisheries resources development	14,690	.02
Wildlife resources development	19,229	.02
Acidic deposition	9,047	.01
Recreation resources--operations	20,364	.03
Environmental/energy education	12,452	.02
Agricultural resources development	226,358	.28
Forest resources development	40,697	.05
Skills development	47,506	.06
Economic development and analysis	96,148	.12
Economic technical assistance	19,229	.02
Tennessee-Tombigbee waterway development	28,277	.04
Navigation development and engineering assistance	26,007	.03
Minority economic development	18,095	.02
Regional air quality management	15,825	.02
Special opportunities cities and counties	61,029	.08
Floodplain management	42,967	.05
Regional waste and water supply management	38,459	.05
Land Between The Lakes operations	199,248	.25
Valley mapping and remote sensing	23,769	.03
Multipurpose reservoir operations	779,497	.96
Hardwood fuels research	142,755	.18
Fertilizer development		
Research and development	930,013	1.15
Ammonia from coal	20,074	.02
Fertilizer technology introduction		
Developmental production	1,190,974	1.47
Farm test demonstrations	35,673	.04
Fertilizer industry demonstrations	192,923	.24
Total	<u>\$81,095,932</u>	<u>100.00</u>

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