BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

Review Of The Audit Of The Tennessee Valley Authority's Financial Statements For The Year Ended September 30, 1983

GAO reviewed the independent certified public accountants' audit of the Tennessee Valley Authority's financial statements for the year ended September 30, 1983. GAO found nothing to indicate the opinion of the independent certified public accountants is inappropriate or cannot be relied on.

In the opinion of the Authority's independent certified public accountants, the financial statements present fairly the Authority's financial position as of September 30, 1983, the results of its operations, and the changes in its financial position for the year then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

GAO/AFMD-85-16
MAY 30, 1985

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-114850

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

This report presents the results of our review of Coopers & Lybrand's audit of the balance sheet (power program and all programs) of the Tennessee Valley Authority (TVA) as of September 30, 1983, 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 the year then ended. Our review was made under provisions of the Tennessee Valley Authority Act (16 U.S.C. 831h), which directs us to audit TVA's transactions at least once each fiscal year and report the results of our audit to the Congress.

Our review was conducted in accordance with generally accepted government auditing standards. To avoid unnecessary duplication and expense and make the most efficient use of our available resources, we relied on the work and report of TVA's independent certified public accountants rather than conduct a financial audit ourselves. To review the reasonableness of the auditors' work and determine the extent to which we could rely on it, we

--interviewed the Authority's officials to obtain information about the Authority's operations, including the maintenance of its financial records and the preparation of its financial statements;

--interviewed the auditors to identify the audit approach used and the methods used to control the quality of audit work;

--obtained information about the qualifications and independence of the auditors;

--reviewed the Authority's financial statements and the auditors' reports for compliance with the reporting requirements of generally accepted accounting principles and generally accepted auditing standards; and

--reviewed the auditors' workpapers to determine:

  - the nature, timing, and extent of audit work performed;

  - whether the audit quality control methods identified by the auditor were actually used;

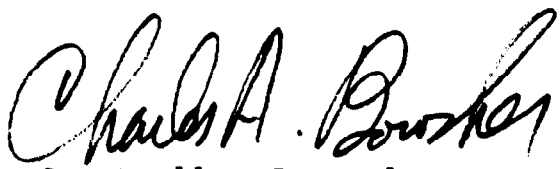
- whether there was a proper study and evaluation of the Authority's internal controls; and
- whether the auditors tested transactions for compliance with applicable laws and regulations.

We found that the audits were conducted in accordance with generally accepted auditing standards.

In the opinion of Coopers & Lybrand, TVA's financial statements present fairly the financial position of the power program and all programs as of September 30, 1983, 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 the year then ended, in conformity with generally accepted accounting principles applied on a consistent basis. During our review, we found nothing to indicate Coopers & Lybrand's opinion on TVA's 1983 financial statements is inappropriate or that it cannot be relied on.

Coopers & Lybrand did not prepare the reports on internal accounting controls and compliance with laws and regulations required by generally accepted government auditing standards because its contract with TVA did not require such reports. However, Coopers & Lybrand did study and evaluate internal accounting controls and test transactions for compliance with key laws and regulations. Its work did not disclose any material internal control weaknesses or noncompliance with laws and regulations. The opinion and financial statements are in appendix I.

We are sending copies of the report to the Director of the Office of Management and Budget, the Secretary of the Treasury, the Secretary of Energy, and TVA's Board of Directors.



Comptroller General
of the United States

APPENDIX I

TENNESSEE VALLEY AUTHORITY

(A CORPORATION WHOLLY OWNED BY THE UNITED STATES OF AMERICA)

FINANCIAL STATEMENTS

FOR THE

FISCAL YEAR ENDED SEPTEMBER 30, 1983

APPENDIX I

TENNESSEE VALLEY AUTHORITY

FINANCIAL STATEMENTS

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Prepared by the Division of the Comptroller

Robert L. Yates, Comptroller

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

(A CORPORATION WHOLLY OWNED BY THE UNITED STATES OF AMERICA)

BALANCE SHEETS SEPTEMBER 30, 1983 AND 1982

ASSETS

	Power program		All programs	
	1983	1982	1983	1982
	(Thousands of Dollars)			
PROPERTY, PLANT, AND EQUIPMENT substantially all at original cost				
Completed plant; schedule A				
Multipurpose dams; note 1	$ 535,162	$ 529,486	$ 1,275,846	$ 1,269,045
Single-purpose dams	361,818	359,863	361,818	359,863
Steam production plant	3,504,784	3,170,209	3,504,784	3,170,209
Nuclear production plant	2,594,372	2,522,322	2,594,372	2,522,322
Other electric plant	2,761,134	2,553,265	2,761,134	2,553,265
Other plant	-	-	286,681	222,600
	9,757,270	9,135,145	10,784,635	10,097,304
Less accumulated depreciation and depletion; note 2	2,607,937	2,377,512	2,819,415	2,581,561
Completed plant, net	7,149,333	6,757,633	7,965,220	7,515,743
Construction in progress; schedule B and note 3	5,839,895	5,034,542	6,138,787	5,337,149
Deferred nuclear generating projects, net; schedule B and note 3	2,667,051	2,614,643	2,667,051	2,614,643
	8,506,946	7,649,185	8,805,838	7,951,792
Nuclear fuel; schedule B	457,239	318,297	457,239	318,297
Less accumulated amortization; schedule B and note 2	416,479	301,901	416,479	301,901
Nuclear fuel, net	40,760	16,396	40,760	16,396
Total	15,697,039	14,423,214	16,811,818	15,483,931
INVESTMENT FUNDS at amortized cost				
Bond retirement; note 4	68,426	32,291	68,426	32,291
Decommissioning of nuclear plant; note 4	34,922	26,775	34,922	26,775
Total	103,348	59,066	103,348	59,066
CURRENT ASSETS				
Cash	59,981	65,430	270,469	219,669
Accounts receivable	450,542	450,598	466,743	461,915
Inventories, principally at average cost	767,831	788,695	783,780	811,131
Total	1,278,354	1,304,723	1,520,992	1,492,715
DEFERRED CHARGES AND OTHER ASSETS				
Loans and other long-term receivables	279,314	294,847	311,989	329,341
Unamortized cost of cancelled nuclear generating units; note 3	1,004,360	1,291,538	1,004,360	1,291,538
Spent nuclear fuel disposal costs; note 5	102,869	-	102,869	-
Mine and mill development costs, net; schedule B and note 2	267,461	289,913	267,461	289,913
Energy conservation cost, net; schedule B and note 2	68,102	65,876	68,102	65,876
Unamortized debt issue and reacquisition expense; note 2	6,558	7,153	6,558	7,153
Total	1,728,664	1,949,327	1,761,339	1,983,821
Total assets	$18,807,405	$17,736,330	$20,197,497	$19,019,533

Notes 1 through 13 following the exhibits are an integral part of the financial statements.

*Deduct

APPENDIX I

EXHIBIT I

CAPITALIZATION AND LIABILITIES

	Power program		All programs	
	1983	1982	1983	1982
	(Thousands of Dollars)			
PROPRIETARY CAPITAL				
Appropriation investment; note 6				
Congressional appropriations	$ 1,414,354	$ 1,413,243	$ 4,080,578	$ 3,864,145
Transfers of property from other Federal agencies, net	23,905	23,846	58,540	58,139
	1,438,259	1,437,089	4,139,118	3,922,284
Less repayments to General Fund of the U.S. Treasury; note 7	575,059	555,059	616,786	596,785
Appropriation investment	863,200	882,030	3,522,332	3,325,499
Retained earnings reinvested in the power program; exhibit II	1,728,690	1,396,753	1,728,690	1,396,753
Accumulated net expense of nonpower programs; exhibit III	-	-	1,341,471*	1,230,930*
Total	2,591,890	2,278,783	3,909,551	3,491,322
LONG-TERM DEBT				
Principal; note 8	14,275,000	13,425,000	14,275,000	13,425,000
Less unamortized discount; note 2	4,547	4,923	4,547	4,923
Total	14,270,453	13,420,077	14,270,453	13,420,077
OTHER LIABILITIES				
Decommissioning of nuclear plant	31,752	26,784	31,752	26,784
Disposal of spent nuclear fuel; note 5	157,000	53,629	157,000	53,629
Cancellation costs for nuclear generating units; note 3	127,769	212,334	127,769	212,334
Total	316,521	292,747	316,521	292,747
CURRENT LIABILITIES				
Short-term debt; note 8				
U.S. Treasury	150,000	150,000	150,000	150,000
Federal Financing Bank	565,000	585,000	565,000	585,000
Short-term debt	715,000	735,000	715,000	735,000
Accounts payable	369,951	439,087	417,188	481,820
Refund due power customers; note 12	157,718	184,139	157,718	184,139
Employees' accrued leave	30,675	29,062	45,658	47,836
Payrolls accrued	25,883	27,017	36,094	36,174
Interest accrued	329,314	330,418	329,314	330,418
Total	1,628,541	1,744,723	1,700,972	1,815,387
COMMITMENTS AND CONTINGENCIES; notes 3, 9, 11, and 13				
Total capitalization and liabilities	$18,807,405	$17,736,330	$20,197,497	$19,019,533

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

EXHIBIT II

POWER PROGRAM

STATEMENTS OF INCOME AND RETAINED EARNINGS

FOR THE YEARS ENDED SEPTEMBER 30, 1983, 1982, AND 1981

	1983		1982		1981	
	kWh	Amount	kWh	Amount	kWh	Amount
			(Thousands of Dollars)			
OPERATING REVENUES						
Sales of electric energy						
Municipalities and cooperatives	76,305,236	$2,936,006	75,681,355	$2,815,440	76,680,264	$2,525,399
Federal agencies	16,352,790	693,909	16,670,674	670,902	14,807,292	474,928
Industries	13,065,280	583,180	15,490,317	626,437	22,180,276	714,925
Electric utilities	157,764	7,958	353,778	13,828	709,330	27,748
Interdivisional	352,705	15,116	350,764	14,273	477,943	17,216
Revenue credit due customers; note 12	-	152,000*	-	183,732*	-	-
Total sales of electric energy	106,233,775	4,084,169	108,546,888	3,957,148	114,855,105	3,760,216
Rents		16,525		16,737		16,346
Discounts and penalties		2,244		868		524
Other miscellaneous revenues		11,381		7,049		2,965
Total operating revenues		4,114,319		3,981,802		3,780,051
OPERATING EXPENSES; schedule C						
Production						
Fuel		1,359,587		1,322,235		1,449,443
Other		469,914		534,903		561,752
Transmission		48,444		45,107		34,049
Customer accounts		19,007		9,059		841
Power consumer services		17,684		9,095		4,724
Demonstration of power use		17,364		16,890		10,936
Research, development, and demonstrations		61,462		58,777		52,461
General and administrative		79,358		76,635		140,417#
Payments in lieu of taxes		165,193		163,461		137,438
Provision for depreciation		247,054		225,095		198,244
Total operating expenses		2,485,067		2,461,257		2,590,305
Operating income		1,629,252		1,520,545		1,189,746
OTHER INCOME AND DEDUCTIONS						
Interest income		8,466		1,343		1,379
Amortization of loss on cancelled nuclear generating units; note 3		204,168*		256,647*		400,000*
Other, net		2,725*		3,298*		11,923*
Total other income and deductions		198,427*		258,602*		410,544*
Income before interest charges		1,430,825		1,261,943		779,202
INTEREST CHARGES						
Interest on long-term debt		1,437,271		1,260,832		961,083
Other interest expense		52,363		121,481		211,372
Allowance for borrowed funds used during construction; note 2		498,301*		511,745*		178,243*
Amortization of long-term debt discount and expense; note 2		988		974		966
Net interest charges		992,321		871,542		995,178
NET INCOME (LOSS)		438,504		390,401		(215,976)
Return on appropriation investment; note 7		106,567		109,478		86,417
Increase (decrease) in retained earnings reinvested		331,937		280,923		(302,393)
Retained earnings reinvested at beginning of period		1,396,753		1,115,830		1,418,223
Retained earnings reinvested at end of period		$1,728,690		$1,396,753		$1,115,830

Notes 1 through 13 following the exhibits are an integral part of the financial statements.
#Includes employee benefits which were included with labor charges to functional accounts beginning in 1982.

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

EXHIBIT III

NONPOWER PROGRAMS

STATEMENTS OF NET EXPENSE AND ACCUMULATED NET EXPENSE

FOR THE YEARS ENDED SEPTEMBER 30, 1983, 1982, AND 1981

	1983	1982	1981
	(Thousands of Dollars)		
GENERAL RESOURCES DEVELOPMENT			
Navigation operations	$ 8,637	$ 8,563	$ 6,856
System flood control operations	9,229	7,167	6,022
Recreation development	7,933	6,421	5,587
Community preparedness	3,450	3,771	5,244
Environmental protection of public lands and water	964	686	589
Regional water quality management	1,674	1,482	1,025
Fisheries and wildlife resources development	1,794	1,457	1,466
Environmental education	625	587	473
Valley agricultural development	5,303	3,741	3,761
Forest resources development	1,505	1,284	1,149
Acidic precipitation assessment	308	401	-
TVA lands planning	728	522	413
Renewable fuels research	1,970	2,348	-
Townlift	1,179	978	2,127
Industrial skills development	2,152	1,129	1,897
Economic development and analysis	3,198	2,403	-
Waterway development and engineering assistance	1,744	1,206	-
Minority economic development	2,245	1,340	-
Special opportunities cities and counties program	2,204	1,112	2,686
Floodplain management	2,579	3,585	3,598
Land Between The Lakes operations	8,514	6,098	5,777
Valley mapping and remote sensing	1,047	954	944
Other general resources development projects	592	687	1,281
Net expense of general resources development	69,574	57,922	50,895
FERTILIZER DEVELOPMENT; note 2			
Research and development	18,336	16,063	14,684
Fertilizer introduction			
Fertilizer industry demonstrations	3,552	3,457	3,074
Farm test demonstrations outside the Valley	1,878	1,136	1,483
Net expense of fertilizer introduction	5,430	4,593	4,557
Developmental production			
Cost of products distributed	36,680	36,453	37,047
General expenses			
Loss on retirements of manufacturing plant and equipment, net	145	222	570
Gain on sale of phosphate reserves, net	181*	-	17,479*
General and administrative	926	170	166
Other	1,724	867	466*
Total general expenses	2,614	1,259	17,209*
Total production expense	39,294	37,712	19,838
Less transfers and sales of products			
Transfers to other TVA programs, at market prices	20,312	23,827	28,454
Direct sales	362	358	292
Total transfers and sales	20,674	24,185	28,746
Net expense of developmental production	18,620	13,527	8,908*
Net expense of fertilizer development	42,386	34,183	10,333
NATIONAL ENERGY DEMONSTRATIONS	32	12,527	29,674
OTHER EXPENSE, NET	1,451*	761*	931
NET EXPENSE; schedule D	110,541	103,871	91,833
Accumulated net expense at beginning of period	1,230,930	1,127,059	1,035,226
Accumulated net expense at end of period	$1,341,471	$1,230,930	$1,127,059

Notes 1 through 13 following the exhibits are an integral part of the financial statements.

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

STATEMENTS OF CHANGES IN FINANCIAL POSITION

FOR THE YEARS ENDED SEPTEMBER 30, 1983, 1982, AND 1981

	Power program			All programs		
	1983	1982	1981	1983	1982	1981
	(Thousands of Dollars)					
SOURCE OF FUNDS						
Program sources						
Net power income or loss*; exhibit II	$ 438,504	$ 390,401	$ 215,976*	$ 438,504	$ 390,401	$ 215,976*
Items not requiring funds; note a	20,000	20,019	447,838	20,000	20,019	447,838
Funds from power operations	458,504	410,420	231,862	458,504	410,420	231,862
Sale of power assets, principally nuclear fuel sales	183,795	312,055	189,604	183,795	312,055	189,604
Funds from power program; note b	642,299	722,475	421,466	642,299	722,475	421,466
Net expense of nonpower programs; exhibit III				110,540*	103,871*	91,833*
Add items not requiring funds; note a				9,849	9,519	7,090*
Funds used in nonpower operations				100,691*	94,352*	98,923*
Sale of nonpower facilities				1,592	916	30,326
Funds used in nonpower programs				99,099*	93,436*	68,597*
Debt sources						
Long-term bonds						
Issues	850,000	2,100,000	2,300,000	850,000	2,100,000	2,300,000
Short-term notes						
Issues	2,855,000	3,870,000	6,660,000	2,855,000	3,870,000	6,660,000
Redemptions	2,875,000*	4,595,000*	6,985,000*	2,875,000*	4,595,000*	6,985,000*
Total debt sources	830,000	1,375,000	1,975,000	830,000	1,375,000	1,975,000
Other sources						
Sale of equipment at cancelled and deferred nuclear units	28,094	6,872#	-	28,094	6,872#	-
Liability for disposal of spent nuclear fuel	95,834	-	-	95,834	-	-
Liability for cancellation costs for nuclear generating units (adjustment for 1983)	70,416*	212,334	-	70,416*	212,334	-
Congressional appropriations	1,141	1,677	992	216,433	129,162	201,936
Property transfers	59	10*	47	400	36*	320
Total other sources	54,712	220,873	1,039	270,345	348,332	202,256
Total source of funds	$1,527,011	$2,318,348	$2,397,505	$1,643,545	$2,352,371	$2,530,125
DISPOSITION OF FUNDS						
Expended for plant and equipment, excluding allowance for borrowed funds used	$1,228,271	$1,814,102#	$2,220,560	$1,295,626	$1,911,812#	$2,296,635
Less:						
Depreciation and depletion allowances charged to construction clearing accounts and other asset categories	10,458	9,301	8,778	12,641	12,424	11,339
Cost of removing retired facilities and salvage from retained materials	6,816*	3,149*	3,571*	7,118*	9,211	12,869*
	1,224,629	1,807,950	2,215,353	1,290,103	1,890,177	2,298,165
Payments to U.S. Treasury; note 7						
Return on appropriation investment	106,567	109,478	86,417	106,567	109,478	86,417
Repayments of appropriation investment	20,000	20,000	20,000	20,000	20,000	20,011
	126,567	129,478	106,417	126,567	129,478	106,428
Investment funds	43,995	59,066	-	43,995	59,066	-
Changes in other assets and liabilities						
Loans and other long-term receivables	15,533*	54,274	118,795	17,352*	67,401	137,529
Spent nuclear fuel disposal costs	102,869	-	-	102,869	-	-
Mine and mill development cost	1,603*	24,310	20,998	1,603*	24,310	20,998
Energy conservation cost	32,524	35,231	33,534	32,524	35,231	33,534
Cancellation costs for nuclear generating units (adjustment for 1983)	70,416*	212,334	-	70,416*	212,334	-
Payment of cancellation costs for nuclear generating units	14,148	-	-	14,148	-	-
Debt issue expense	17	48	40	17	48	40
	62,006	326,197	173,367	60,187	339,324	192,101
Changes in working capital (increase or decrease*)						
Cash	5,449*	40,165*	102,534	50,800	103,041*	142,757
Accounts receivable	56*	37,148	3,924	4,828	40,651	83*
Inventories	20,863*	204,730	161,074*	27,351*	203,900	159,430*
	26,368*	201,713	54,616*	28,277	141,510	16,756*
Less other current liabilities (excluding short-term debt)	96,182*	206,056	43,016	94,416*	207,184	49,813
	69,814	4,343*	97,632*	122,693	65,674*	66,569*
Total disposition of funds	$1,527,011	$2,318,348	$2,397,505	$1,643,545	$2,352,371	$2,530,125

#Certain amounts were reclassified in 1982 for comparative purposes.

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
STATEMENTS OF CHANGES IN FINANCIAL POSITION
FOR THE YEARS ENDED SEPTEMBER 30, 1983, 1982, AND 1981

NOTES:

a. Items not requiring funds:

	Power			Nonpower		
	1983	1982	1981	1983	1982	1981
	(Thousands of Dollars)					
Provision for depreciation	$247,054	$225,095	$198,244	$9,885	$9,297	$ 9,819
Amortization of loss on cancelled nuclear units	204,168	256,647	400,000	-	-	-
Net loss or gain* on retirements and disposals of property, plant, and equipment	2,725	3,298	11,923	36*	222	16,909*
Amortization of energy conservation cost	30,297	14,705	7,067	-	-	-
Provision for writeoff of uranium properties	20,850	18,800	3,000	-	-	-
Provision for disposal of spent fuel	7,537	5,354	4,881	-	-	-
Provision for decommissioning nuclear plants	4,968	6,891	-	-	-	-
Amortization of long-term debt discount and expense	988	974	966	-	-	-
Amortization of discount on investments	286*	-	-	-	-	-
Allowance for borrowed funds used during construction	498,301*	511,745*	178,243*	-	-	-
	$ 20,000	$ 20,019	$447,838	$9,849	$9,519	$ 7,090*

b. Net power proceeds (see note 8) may be derived as follows:

	Year ended September 30		
	1983	1982	1981
	(Thousands of Dollars)		
Funds from power program	$ 642,299	$ 722,475	$ 421,466
Add interest	1,489,634	1,382,313	1,172,455
Net power proceeds	$2,131,933	$2,104,788	$1,593,921

Notes 1 through 13 following the exhibits are an integral part of the financial statements.

*Deduct

APPENDIX I

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS

1. Allocation of cost of multipurpose projects--Section 14 of the TVA Act requires TVA's Board of Directors to allocate the cost of completed multipurpose projects, subject to the approval of the President of the United States. 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 $1,275,846,000 in completed multipurpose dams at September 30, 1983, is classified as follows:

	Investment		
	Direct	Multiple-use	Total
	(Thousands)		
Power	$328,998	$206,164	$ 535,162
Navigation	164,289	162,256	326,545
Flood control	65,364	183,347	248,711
Recreation	6,329	115,079	121,408
Local economic development	144	43,876	44,020
Total	$565,124	$710,722	$1,275,846

2. Summary of significant accounting policies--Power accounts are kept in accordance with the uniform system 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--Provisions for decommissioning costs of nuclear generating units are 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 1983 were based on a current dollar value amounting to $51 million and $57 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 calculation each month of the interest on the most recent debt issues that are equivalent to the average balance of construction work in progress.

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--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. During fiscal year 1980, TVA entered into an agreement whereby it sells and leases back nuclear fuel on hand except for that prior to the milling stage or in a spent condition. Although the lease meets the criteria of a capital lease as defined by statement of Financial Accounting Standards No. 13, it is not accounted for as such in accordance with the ratemaking process. Certain nuclear fuel amounts included in the

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS—CONTINUED

balance sheet at September 30, 1983, represent acquisition transactions that will be included in the sale-lease agreement during ensuing months. The nuclear fuel costs are 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 (see note 5).

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

Energy conservation costs--Certain energy conservation program costs are deferred and charged to operations over a five-year period.

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. A determination has been made that the cost related to certain uranium properties may not be recovered from future operations and that such costs should be charged to operations over a five-year period beginning in fiscal year 1981 with a reevaluation of the provision to be made annually. The unamortized balance of the provision at September 30, 1983, was approximately $83,000,000.

Operating revenues--Revenues from the sale of electric energy are recorded only when billed. Revenue credits due customers are recorded in accordance with authorization of the Board of Directors.

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.

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.

3. Construction projects--The construction budgets for fiscal year 1984 are $1,593,400,000 for power projects and $34,965,000 for multipurpose and nonpower projects. Substantial commitments have been incurred for these projects.

In August 1982, the TVA Board of Directors approved cancellation of construction of four previously deferred nuclear generating units, two units at Phipps Bend plant and two units at the Hartsville plant site. The plants being constructed were to meet forecasted load requirements based upon projected growth in demand for electricity at the time construction began. Updated forecasts of the demand for electricity indicated that the forecasted level of demand upon which the plants were being constructed may not be realized by the time the plants had been scheduled for completion, or during the time covered by the updated forecasts. Because of the probability of permanent curtailment of certain nuclear generating units in a deferred construction status, the estimated minimum cost of such curtailment of $400 million for one unit had been included in the expenses of TVA for fiscal year 1981.

The unamortized balance of costs incurred on the cancelled units will be recovered through rates from customers and accordingly is being reflected as a deferred charge on the balance sheet. Annual amortization of these costs is calculated as the amount equivalent to the allowance for funds used less other noncash charges plus the amount of the repayment of the appropriation investment to the U.S. Treasury. By resolution of the TVA Board of Directors, the total amount must be amortized within ten years of date of cancellation. For fiscal years 1983 and 1982, the amount of the amortization of the loss on cancelled plants was $204 million and $257 million, respectively.

In addition, at September 30, 1983, construction of four nuclear generating units was in a deferred status due to Board action in fiscal years 1981 and 1982. An August 1983 load forecast and power supply summary prepared by TVA indicates that the continued deferral of these units is in the best interest of the TVA ratepayer. At September 30, 1983, cost incurred on these deferred units was approximately $2.7 billion. If these deferred units are not completed, additional costs for permanent curtailment of these projects will be recognized.

4. Investment funds--TVA has made investments of power funds to provide for the accumulation of funds required for retirement of bonds and decommissioning of nuclear plants. The bond retirement fund was established to provide funds to retire $1.85 billion of bond debt by the end of the 20th year from the date of the cancellation of construction of the four nuclear units in fiscal year 1982. The decommissioning fund was established to provide funds for estimated nuclear plant decommissioning costs anticipated to be incurred at the end of the life of the nuclear generating plants. Annual deposits into the funds are based upon annual calculations of the fund requirements considering rates of return, inflation, and revised estimates for decommissioning costs.

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS—CONTINUED

5. Disposal of spent nuclear fuel--The Nuclear Waste Policy Act of 1982 provides that the U.S Department of Energy (DOE) will dispose of spent nuclear fuel beginning not later than January 1998 under contracts with owners or generators of such spent fuel. Under the terms of the contract with DOE for such services, TVA's obligation for spent nuclear fuel in existence as of April 7, 1983, is $157 million, payment of which is not expected prior to July 1985. A portion of this liability is deferred in anticipation of collection from a fuel supplier.

The contract with DOE also provides for quarterly payments to DOE based on one mill per kWh of electricity generated after April 7, 1983, to cover DOE disposal services for spent fuel. TVA also anticipates collecting a portion of the quarterly payments, which are being charged to operations, from a fuel supplier.

6. Appropriation investment--Changes in appropriation investment during the years ended September 30, 1983 and 1982, were as follows:

	Power program		All programs	
	1983	1982	1983	1982
	(Thousands)			
Congressional appropriations, net	$ 1,111	$ 21,642	$ 216,433	$ 129,162
Transfers of property from other Federal agencies	59	10*	400	36*
	1,170	21,632	216,833	129,126
Less repayments to General Fund of the U.S. Treasury	20,000	20,000	20,000	20,000
Increase or decrease* for the period	18,830*	1,632	196,833	109,126
Balance, beginning of period	882,030	880,398	3,325,499	3,216,373
Balance, end of period	$863,200	$882,030	$3,522,332	$3,325,499

*Deduct

An appropriation of $78,229,000 for the fiscal year beginning October 1, 1983, has been approved.

7. 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, 1982	$1,308,078	$370,000	$1,678,078
Year ended September 30, 1983	106,567	20,000	126,567
	$1,414,645	$390,000	$1,804,645

For fiscal year 1984 the required payments will be $93,657,000 as a return on the appropriation investment at the computed average interest rate of 10.850 percent, and $20,000,000 as a repayment, a total of $113,657,000.

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. There were no payments made in 1983, but previous payments from nonpower proceeds amount to $41,726,000.

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.

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS—CONTINUED

8. 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 7. Issues outstanding on September 30, 1983, consist of the following:

	(Thousands)
Long-term debt	
Held by the public	
4.40% 1960 Series A, due November 15, 1985	$ 50,000
4-5/8% 1961 Series A, due July 1, 1986	50,000
4-1/2% 1962 Series A, due February 1, 1987	45,000
5.70% 1967 Series A, due May 15, 1992	70,000
6-3/8% 1967 Series B, due November 1, 1992	60,000
8-1/4% 1969 Series B, due October 15, 1994	100,000
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
8.05% 1974 Series A, due January 1, 1999	100,000
	1,725,000
Federal Financing Bank	
8.05% 1975 Series A, due January 31, 1990	200,000
8.70% 1975 Series B, due March 31, 2000	100,000
8.35% 1975 Series C, due May 31, 1988	200,000
8.47% 1975 Series D, due July 31, 2000	200,000
8.485% 1975 Series E, due October 31, 2000	300,000
8.175% 1976 Series A, due February 28, 2001	300,000
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
9.155% 1979 Series B, due May 31, 1987	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
	12,550,000
Total long-term debt	14,275,000
Short-term debt	
U.S. Treasury	150,000
Federal Financing Bank	565,000
Total short-term debt	715,000
	$14,990,000

An additional issue, 1983 Series E, due January 31, 2014 in the amount of $150 million at the interest rate of 11.905 percent was issued November 3, 1983, to the Federal Financing Bank.

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS—CONTINUED

The interest rate on short-term debt owed to U.S. Treasury as of September 1983, was 9.50 percent and the average rate on short-term debt outstanding with Federal Financing Bank as of September 30, 1983, was 9.48 percent.

During fiscal years 1983, 1982, and 1981, the maximum amount of short-term borrowings outstanding was $910,000,000, $1,790,000,000, and $2,000,000,000, respectively, and the average amount (and weighted average interest rates) of such borrowings was approximately $700,000,000 (8.7 percent), $880,000,000 (13.8 percent), and $1,450,000,000 (14.5 percent), respectively.

9. Lease obligations--At September 30, 1983, TVA had sold and was committed to lease back approximately $1.4 billion of nuclear fuel. Estimated lease payments (exclusive of finance charges) are estimated to be: 1984, $134 million; 1985, $202 million; 1986, $226 million; 1987, $317 million; 1988, $394 million. These estimates include additional sale-lease transactions. Lease payments for nuclear fuel charged to operations for the years ended September 30, 1983, 1982, and 1981, amounted to approximately $110 million, $84 million, and $57 million, respectively.

At September 30, 1983, the aggregate minimum gross rental commitments of TVA under all noncancelable operating leases are as follows: 1984, $19,982,000; 1985, $12,710,000; 1986, $9,939,000; 1987, $9,667,000; 1988, $9,305,000; and thereafter, $122,488,000. The total rentals charged to power operating expenses and other operating clearing accounts for the years ended September 30, 1983, 1982, and 1981, amounted to approximately $29,936,000, $32,206,000, and $26,759,000, respectively.

Minimum gross rental commitments include rentals paid under agreements with the City of Memphis, Tennessee, which provide that (1) TVA sells to the City all the power and energy requirements of its electric distribution system, and (2) the City leases to TVA the Thomas H. Allen steam-electric generating plant with an installed capacity of 990,000 kilowatts. Each agreement is for a term of 20 years, beginning January 1, 1965. The lease agreement provides for annual rental payments of $6,900,000 and grants TVA an option to buy the plant for $2,000,000 at the end of the lease term. The option will be exercised on December 31, 1984.

10. 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 $72,608,000 in 1983, $71,955,000 in 1982, and $70,241,000 in 1981. These costs are charged to all TVA activities in relation to direct labor charges.

The valuation information as of September 30, 1982 and 1981, the latest actuarial valuation dates, follows:

	1982	1981
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	$666,543	$614,887
Nonvested	43,027	38,940
	$709,570	$653,827
Net assets at market value available for benefits (thousands)	$864,745	$684,737

11. 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 $570 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 $410 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 foward 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 $48,125,000 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 $415 million and is subject to a maximum assessment of approximately $17,920,000 in the event losses by NEIL members exceed its available funds.

12. Revenue credit due customers--In August 1983, the TVA Board of Directors authorized that $152 million of fiscal year 1983 collections from power sales and the unapplied balance of previously authorized credits up to $8 million be returned to customers. The balance at September 30, 1983, of approximately $158,000,000 will be returned in the form of power credits

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
NOTES TO FINANCIAL STATEMENTS—CONTINUED

applied to monthly power bills during fiscal year 1984. In fiscal year 1982, the Board authorized a revenue credit of $183,732,000, of which $140,000,000 was to be applied in fiscal year 1983. In February 1983, the Board authorized the use of the remaining balance of $44,000,000 as an application to March 1983 billings.

13. Litigation--A consent decree, incorporating the terms of a settlement agreement in five cases, was approved and entered by the United States District Court for the Middle District of Tennessee in December 1980. The citizens' suits had been filed in five different district courts under the Clean Air Act. The complaints alleged that the sulfur dioxide emissions from eight of TVA's coal-fired steam plants and the particulate emissions from six coal-fired plants violate the emission standards set by the States. Plaintiffs include the Commonwealth of Kentucky and the United States of America at the request of the Environmental Protection Agency (EPA). The cases were consolidated in the United States District Court for the Middle District of Tennessee. A consent decree, incorporating the terms of a settlement agreement covering two plants in Alabama, was approved and entered by the United States District Court for the Northern District of Alabama in October 1979. Both settlements specify compliance schedules to control sulfur dioxide and particulate emissions at TVA steam plants and provide for stipulated daily penalties if TVA does not meet these compliance schedules. TVA liability for penalties and fines for past violations is waived. TVA's August 1979 proposal to delete the Cumberland scrubber project and any reference to activities in lieu of penalties and TVA's August 1980 proposal to delete the Johnsonville scrubber project and substitute therefor a low-sulfur coal compliance strategy for that plant were agreed to by all parties and incorporated into the settlements. TVA is potentially subject by law to noncompliance penalties under Section 120 of the Clean Air Amendments of 1977, which if levied by EPA, will be separate from the court action. Temple, Barker & Sloan, Inc., in a report prepared for EPA, estimated TVA's potential liability, calculated from July 1979 to the date TVA's plants will achieve compliance, at about $320 million. Since the report was issued, EPA has promulgated final regulations implementing Section 120. These final regulations provide for calculation of penalties from the date of receipt of a notice of violation until compliance is achieved and do not consider preceding periods of noncompliance. It is EPA's stated policy to issue notices first to those sources not in compliance with approved compliance schedules. As of mid-December 1983, all of TVA's plants were brought into final compliance in accordance with approved compliance schedules. Accordingly, under EPA's final regulations and stated policy there is little likelihood that TVA would be assessed any penalties.

A directly served industrial power customer has filed suit to have its December 31, 1980 power contract declared void because of alleged misrepresentations by TVA, and seeks unspecified amounts of damages, court costs, and attorneys' fees. TVA has counterclaimed for amounts due under the contract. Since filing the suit, the customer has filed a petition for reorganization under Chapter 11 of the bankruptcy laws. In TVA's opinion, the contract is valid but the amount of any recovery is subject to the uncertainties involved in the debtor's financial condition.

Another directly served industrial customer has filed suit claiming that TVA has miscomputed the minimum monthly billing demand applicable under its contracts for computing minimum monthly power bills. TVA applies the contractual formula to the customer's aggregate contract demand under all contracts for service to its plant; the customer contends that the minimum billing demand should first be separately computed under each contract then aggregated, and that TVA's method has overstated the power bills by over $2 million since October 1981. Plaintiff seeks a money judgment for the alleged overstated amounts which it has paid, a declaratory judgment that TVA calculate plaintiff's power bills in accordance with plaintiff's method, and its costs and disbursements. In TVA's opinion, there is little likelihood of recovery.

As reported here previously, the United States District Court in Chattanooga dismissed the suit challenging the reconstruction and operation of the Ocoee No. 2 hydroelectric project. The court granted TVA's motion for summary judgment, finding that the TVA Board's reconsideration and reaffirmation of its decisions concerning the project complied with the law, and further concluding that the National Environmental Policy Act of 1969 "does not dictate that the TVA direct power resources or funds to nonpower purposes." Plaintiffs did not appeal. The United States District Court in Nashville ruled that TVA does not need a permit from the Tennessee State Water Quality Board in order to divert the river from its bed for hydroelectric generation purposes. The United States Court of Appeals for the Sixth Circuit has affirmed the district court. The time for further appeal has not expired.

On November 18, 1977, TVA filed antitrust suits against 10 foreign uranium producers and 3 domestic firms. The complaints were filed in United States District Courts in Chattanooga, Denver, and New York City and alleged unlawful agreements among the defendants to fix uranium prices and allocate world uranium markets, which resulted in damages to TVA in an amount which has not yet been precisely determined. The cases were consolidated in Chicago for pretrial purposes by the Judicial Panel on Multidistrict Litigation. To date, settlements have been reached with seven foreign defendants and two domestic defendants. The benefits to TVA of this partial settlement of the suit total hundreds of millions of dollars. The case against two defendants was dismissed. Discovery is continuing against the remaing defendants, Gulf Oil Corporation and Gulf Minerals Canada Ltd. The case is scheduled to go to trial in January 1984.

A suit filed in the United States District Court for the Middle District of Tennessee challenges TVA's charging of rates to produce revenues to pay interest costs o funds borrowed for construction of new facilities. Plaintiffs seek a declaratory judgment that TVA's action is unlawful and an injunction requiring TVA to "refund" to consumer about $1 billion in alleged "overcharges," representing current interest charges collected from ratepayers. TVA has moved to dismiss or for summary judgment. In TVA's opinion, plaintiffs are unlikely to prevail.

A suit filed in the United States District Court for the Northern District of Alabama alleges that for more than 20 years TVA and a municipal electric distributor have charged a higher rate for electricity usage per kilowatthour and a higher base rate to the residents of Limestone County living outside the corporate limits of Athens, Alabama, than to those living within the city. Plaintiff requests injunctive relief against the practice and that a sum in excess of $9,610,000 in "overcharges" be returned to the past and present rural customers of the distributor. The defendants have moved for summary judgment. In TVA's opinion, the plaintiff is unlikely to prevail.

A suit filed in the United States District Court for the Eastern District of Tennessee seeks $1,200,000 damages and declaration that section 2(b) of the power contract between a power distributor and TVA is null and void. Plaintiff (a municipal corporation) alleges that TVA in concert with the Tennessee Valley Public Power Association has created an illegal policy resulting in distributor contracts which allow certain TVA power distributors to directly serve large industrial customers while prohibiting others such as the plaintiff from doing the same. Plaintiff alleges this activity is in violation of the Sherman Antitrust Act and the preference provision contained in Section 10 of the TVA Act. TVA has filed a motion for summary judgment which is pending. In TVA's opinion, plaintiff is unlikely to prevail.

APPENDIX I

Coopers
&Lybrand

certified public accountants

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, 1983 and 1982, 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, 1983. 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 (Exhibits I through IV).

In our opinion, 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, 1983 and 1982, 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, 1983, 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, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Coopers & Lybrand

Knoxville, Tennessee
November 23, 1983

S C H E D U L E S

APPENDIX I

TENNESSEE VALLEY AUTHORITY
COMPLETED PLANT
SEPTEMBER 30, 1983

	Assets	Accumulated depreciation and depletion
Power		
Multipurpose dams		
System allocation; page 21	$ 446,018,552	$ 207,605,829
Project allocations; page 23	89,143,820	14,916,224
Single-purpose dams; page 25	361,818,207	58,738,614
Steam production plants; page 25	3,504,783,528	1,256,446,905
Nuclear production plants; page 26	2,594,372,197	309,360,859
Other electric plant; page 26	2,761,133,517	760,868,588
Total power	9,757,269,821	2,607,937,019
Navigation		
Multipurpose dams		
System allocation; page 21	241,018,207	69,236,874
Project allocations; page 23	85,526,250	9,939,964
Total navigation	326,544,457	79,176,838
Flood control		
Multipurpose dams		
System allocation; page 21	180,553,000	46,548,980
Project allocations; page 23	68,157,713	2,775,274
Single-purpose flood control plant; page 27	2,065,257	244,196
Total flood control	250,775,970	49,568,450
Recreation and environmental education		
Multipurpose dams		
Project allocations; page 23	121,408,331	4,822,127
Land Between The Lakes; page 27	71,499,126	8,100,994
Other recreation plant; page 27	5,083,201	845,315
Total recreation and environmental education	197,990,658	13,768,436
Local economic development		
Multipurpose dams		
Project allocations; page 23	44,020,203	2,720,961
Chemical; page 27	147,030,243	36,326,276
General; page 27	61,003,436	29,916,922
Total	$10,784,634,788	$2,819,414,902
Total completed plant		
Multipurpose dams		
System allocation	$ 867,589,759	$ 323,391,683
Project allocations	408,256,317	35,174,550
	1,275,846,076	358,566,233
Single-purpose dams	361,818,207	58,738,614
Steam production plants	3,504,783,528	1,256,446,905
Nuclear production plants	2,594,372,197	309,360,859
Other electric plant	2,761,133,517	760,868,588
Other plant	286,681,263	75,433,703
Total	$10,784,634,788	$2,819,414,902

TENNESSEE VALLEY AUTHORITY
MULTIPURPOSE DAMS
SYSTEM ALLOCATION
SEPTEMBER 30, 1983

	Assets								Assets							
	Kentucky	Pickwick	Wilson	Wheeler	Guntersville	Chickamauga	Watts Bar	Fort Loudoun	Norris	Hiwassee	Cherokee	Chatuge	Nottely	Fontana	South Holston
Multiple-use facilities															
Reservoir land and landrights	$ 14,663,945	$ 2,796,505	$ 684,167	$ 4,344,168	$ 3,656,626	$ 4,433,967	$ 4,944,538	$ 3,959,407	$ 6,796,500	$ 1,678,482	$ 4,498,515	$ 964,832	$ 413,407	$ 1,625,350	$ 2,424,289
Highway, railroad, and other relocations and removals	27,434,261	1,915,648	136,355	2,113,711	3,867,304	2,704,136	4,977,205	5,111,630	4,308,463	1,191,433	5,519,525	2,693,192	1,344,854	9,017,018	3,765,948
Reservoir clearing	6,915,483	1,509,836	951,436	3,613,759	2,436,597	971,651	953,785	560,341	1,561,458	394,601	575,359	194,329	232,108	1,033,436	892,864
Dam structure, excluding power intake section	27,595,304	6,006,246	13,293,684	8,384,889	5,146,272	8,242,856	3,963,969	8,816,481	10,981,212	9,392,733	13,205,027	3,088,682	3,205,912	45,779,373	17,474,709
Roadways	276,832	33,933	2,116,796	901,410	366,029	165,767	70,281	259,732	266,691	246,235	31,728	38,234	197,851	606,244	211,319
Village and reservoir facilities	2,012,196	159,518	273,116	1,340,351	1,139,594	377,075	200,893	120,469	115,213	159,478	173,212	2,499	2,822	65,499	58,659
Other structures and improvements	1,616,232	628,560	1,312,330	631,509	902,448	1,081,251	1,006,212	811,653	582,862	245,428	950,083	198,636	95,765	3,334,230	994,855
Total	80,514,253	13,050,246	18,767,884	21,329,797	17,514,870	17,976,703	16,116,883	19,639,713	24,612,399	13,308,390	24,953,449	7,180,404	5,492,719	61,461,150	25,802,643
Deduct direct flood control investment, contra below	16,532,000	788,000	-	-	-	1,107,000	1,952,000	786,000	5,506,000	1,356,000	3,467,000	537,000	623,000	7,623,000	4,950,000
Add nonoverflow sections to replace other sections, contra below															
Power intake section	2,890,000	550,000	3,900,000	830,000	780,000	1,470,000	614,000	1,610,000	-	-	-	-	-	-	-
Lock section	210,000	380,000	125,000	200,000	440,000	790,000	565,000	940,000	-	-	-	-	-	-	-
Total multiple-use facilities, allocated below; note 1, page 8	67,082,253	13,192,246	22,792,884	22,359,797	18,734,870	19,129,703	15,343,883	21,403,713	19,106,399	11,952,390	21,486,449	6,643,404	4,869,719	53,838,150	20,852,643
Navigation facilities															
Lock and appurtenances	10,082,252	6,010,874	28,602,749	21,727,975	17,747,559	5,298,610	3,161,199	5,709,247	-	-	-	-	-	-	-
Channel improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deduct nonoverflow section to replace lock section, contra above	210,000	380,000	125,000	200,000	440,000	790,000	565,000	940,000	-	-	-	-	-	-	-
Total before allocation of multiple-use facilities	9,872,252	5,630,874	28,477,749	21,527,975	17,307,559	4,508,610	2,596,199	4,769,247	-	-	-	-	-	-	-
Add allocation of total multiple-use facilities shown above; note 1, page 8															
Total navigation facilities after allocation															
Flood control facilities															
Reservoir land and landrights	-	-	-	-	-	-	-	-	1,318,285	-	-	-	-	-	-
Add direct flood control investment, contra above	16,532,000	788,000	-	-	-	1,107,000	1,952,000	786,000	5,506,000	1,356,000	3,467,000	537,000	623,000	7,623,000	4,950,000
Total before allocation of multiple-use facilities	16,532,000	788,000	-	-	-	1,107,000	1,952,000	786,000	6,824,285	1,356,000	3,467,000	537,000	623,000	7,623,000	4,950,000
Add allocation of total multiple-use facilities shown above; note 1, page 8															
Total flood control facilities after allocation															
Power facilities															
Powerhouse, including intake section	10,768,251	9,484,092	21,899,407	18,040,876	5,673,320	6,312,115	4,987,643	6,240,636	2,304,628	2,574,106	3,177,646	511,136	607,075	5,684,629	2,793,345
Turbines and generators	10,196,421	12,646,616	30,276,876	22,434,826	7,716,741	7,828,832	7,995,391	6,856,041	2,122,440	5,316,089	5,845,681	1,061,886	1,295,462	6,704,930	1,830,884
Accessory electric equipment	1,127,963	1,650,936	5,565,830	2,559,669	823,934	1,446,296	1,527,004	1,246,730	486,468	670,392	713,996	173,100	183,113	1,141,987	434,741
Other power plant equipment	962,637	441,780	2,084,153	675,977	326,199	582,918	830,390	581,187	285,638	550,605	513,730	135,546	131,472	537,137	260,477
Total	23,055,272	24,223,424	59,826,266	43,711,348	14,540,194	16,168,161	15,340,428	14,924,594	5,199,174	9,111,192	10,251,053	1,881,668	2,217,122	14,068,683	5,319,447
Deduct nonoverflow section to replace power intake section, contra above	2,890,000	550,000	3,900,000	830,000	780,000	1,470,000	614,000	1,610,000	-	-	-	-	-	-	-
Total before allocation of multiple-use facilities	20,165,272	23,673,424	55,926,266	42,881,348	13,760,194	14,698,161	14,726,428	13,314,594	5,199,174	9,111,192	10,251,053	1,881,668	2,217,122	14,068,683	5,319,447
Add allocation of total multiple-use facilities shown above; note 1, page 8															
Total power facilities after allocation															
Total	$113,651,777	$43,284,544	$107,196,899	$86,769,120	$49,802,623	$39,443,474	$34,618,510	$40,273,554	$31,129,858	$22,419,582	$35,204,502	$9,062,072	$7,709,841	$75,529,833	$31,122,090
Accumulated depreciation	$ 33,952,297	$21,991,031	$ 50,372,823	$33,552,528	$17,640,889	$17,180,420	$14,751,824	$16,534,470	$10,537,550	$10,681,374	$12,689,126	$2,593,425	$2,741,590	$28,589,942	$ 9,337,31-

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Assets						Assets												
son	Wheeler	Guntersville	Chickamauga	Watts Bar	Fort Loudoun	Norris	Hiwassee	Cherokee	Chatuge	Nottely	Fontana	South Holston	Watauga	Douglas	Boone	Channel Improvements	Total system allocation dams	Accumulated depreciation
84,167	$ 4,344,168	$ 3,656,626	$ 4,433,967	$ 4,944,538	$ 3,959,407	$ 6,796,500	$ 1,678,482	$ 4,498,515	$ 964,832	$ 413,407	$ 1,625,350	$ 2,424,289	$ 4,598,632	$ 6,786,680	$ 2,117,405	$ -	$ 71,387,415	$ -
36,355	2,113,711	3,867,304	2,704,136	4,977,205	5,111,630	4,308,463	1,191,433	5,519,525	2,693,192	1,344,854	9,017,018	3,745,948	6,369,316	8,107,311	2,724,631	-	93,281,941	-
51,436	3,613,759	2,436,597	971,651	953,785	560,341	1,561,458	394,601	575,359	194,329	232,108	1,033,436	892,864	385,808	574,900	575,423	-	24,333,174	-
93,684	8,384,889	5,146,272	8,242,856	3,963,969	8,816,481	10,981,212	9,392,733	13,205,027	3,088,682	3,205,912	45,779,373	17,474,709	10,757,436	16,912,546	6,585,430	-	218,832,761	98,030,871
16,796	901,410	366,029	165,767	70,281	259,732	266,691	246,235	31,728	38,234	197,851	606,244	211,319	341,593	82,469	24,165	-	6,237,309	3,302,276
73,116	1,340,351	1,139,594	377,075	200,893	120,469	115,213	159,478	173,212	2,499	2,822	65,499	58,659	130,205	131,452	76,895	-	6,539,146	3,414,275
12,330	631,509	902,448	1,081,251	1,006,212	811,653	582,862	245,428	950,083	198,636	95,765	3,334,230	994,855	924,985	1,007,856	389,375	-	16,714,270	9,146,985
67,884	21,329,797	17,514,870	17,976,703	16,116,883	19,639,713	24,612,399	13,308,390	24,953,449	7,180,404	5,492,719	61,461,150	25,802,643	23,507,975	33,603,214	12,493,324	-	437,326,016	113,894,407
-	-	-	1,107,000	1,952,000	786,000	5,506,000	1,356,000	3,467,000	537,000	623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	55,439,000	12,689,690
00,000	830,000	780,000	1,470,000	614,000	1,610,000	-	-	-	-	-	-	-	-	-	1,160,000	-	13,804,000	6,400,094
25,000	200,000	440,000	790,000	565,000	940,000	-	-	-	-	-	-	-	-	-	-	-	3,650,000	1,618,706
92,884	22,359,797	18,734,870	19,129,703	15,343,883	21,403,713	19,106,399	11,952,390	21,486,449	6,643,404	4,869,719	53,838,150	20,852,643	20,462,975	26,546,214	13,543,324	-	$399,361,016	$109,223,518
02,749	21,727,975	17,747,559	5,298,610	3,161,199	5,709,247	-	-	-	-	-	-	-	-	-	-	-	$ 98,340,465	$ 34,053,925
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38,505,668	38,505,668	7,311,305
25,000	200,000	440,000	790,000	565,000	940,000	-	-	-	-	-	-	-	-	-	-	-	3,650,000	1,618,706
77,749	21,527,975	17,307,559	4,508,610	2,596,199	4,769,247	-	-	-	-	-	-	-	-	-	-	38,505,668	133,196,133	39,746,524
																	107,822,074	29,490,350
																	241,018,207	69,236,874
-	-	-	-	-	-	1,318,285	-	-	-	-	-	-	-	-	-	-	1,318,285	-
-	-	-	1,107,000	1,952,000	786,000	5,506,000	1,356,000	3,467,000	537,000	623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	55,439,000	12,689,689
-	-	-	1,107,000	1,952,000	786,000	6,824,285	1,356,000	3,467,000	537,000	623,000	7,623,000	4,950,000	3,045,000	7,057,000	110,000	-	56,757,285	12,689,689
																	123,795,715	33,859,291
																	180,553,000	46,548,980
899,407	18,040,876	5,673,320	6,312,115	4,987,643	6,240,636	2,304,628	2,574,106	3,177,646	511,136	607,075	5,684,629	2,793,345	4,933,957	4,734,009	4,742,968	-	115,469,839	51,383,393
276,876	22,434,826	7,716,741	7,828,832	7,995,391	6,856,041	2,122,440	5,316,089	5,845,681	1,061,886	1,295,462	6,704,930	1,830,884	2,583,300	5,887,166	5,244,468	-	143,844,050	91,614,006
565,830	2,559,669	823,934	1,444,296	1,527,004	1,246,730	486,468	670,392	713,996	173,100	183,113	1,141,987	434,741	852,786	733,553	1,019,990	-	22,356,488	18,274,461
084,153	675,977	326,199	582,918	830,390	581,187	285,638	550,605	513,730	135,546	131,472	537,137	260,477	421,220	511,895	595,987	-	10,428,948	6,860,186
826,266	43,711,348	14,540,194	16,168,161	15,340,428	14,924,594	5,199,174	9,111,192	10,251,053	1,881,668	2,217,122	14,068,683	5,319,447	8,791,263	11,866,623	11,603,413	-	292,099,325	168,132,046
900,000	830,000	780,000	1,470,000	614,000	1,610,000	-	-	-	-	-	-	-	-	-	1,160,000	-	13,804,000	6,400,094
926,266	42,881,348	13,760,194	14,698,161	14,726,428	13,314,594	5,199,174	9,111,192	10,251,053	1,881,668	2,217,122	14,068,683	5,319,447	8,791,263	11,866,623	10,443,413	-	278,295,325	161,731,952
																	167,723,227	45,873,877
																	446,018,552	207,605,829
196,899	$86,769,120	$49,802,623	$39,443,474	$34,618,510	$40,273,554	$31,129,858	$22,419,582	$35,204,502	$9,062,072	$7,709,841	$75,529,833	$31,122,090	$32,299,238	$45,469,837	$24,096,737	$38,505,668	$867,589,759	
372,823	$33,552,528	$17,640,889	$17,180,420	$14,751,824	$16,534,470	$10,537,550	$10,681,374	$12,689,126	$2,593,425	$2,741,590	$28,589,942	$ 9,537,914	$ 9,113,320	$15,109,732	$ 8,510,123	$ 7,311,305		$323,391,643

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TENNESSEE VALLEY AUTHORITY
MULTIPURPOSE DAMS
PROJECT ALLOCATIONS
SEPTEMBER 30, 1983

SCHEDULE A
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	Assets									
	Melton Hill	Nickajack	Tellico	Tims Ford	Bear Creek	Duck River	Beech River	Channel improvements	Total project allocations dams	Accumulated depreciation
Multiple-use facilities										
Reservoir land and landrights; note a	$ 3,277,642	$ 3,275,133	$ 25,125,148	$ 8,131,142	$13,026,219	$ 5,560,980	$2,089,256	$ -	$ 60,485,520	$ -
Highway, railroad, and other relocations and removals	2,667,366	9,106,969	51,348,905	12,363,625	7,880,886	11,149,013	222,931	-	94,739,695	-
Reservoir clearing	904,168	736,362	5,357,147	3,057,249	6,506,321	512,541	953,369	-	18,027,157	-
Dam structure, excluding power intake section	3,304,667	9,998,809	30,084,731	14,132,918	36,087,769	18,535,058	2,943,715	-	115,087,667	10,214,001
Roadways	419,617	499,660	9,705,490	352,346	1,731,810	-	80,600	-	12,789,523	864,438
Village and reservoir facilities	179,000	369,949	10,717,023	83,127	561,587	584,450	221,958	-	12,717,094	1,013,321
Other structures and improvements	1,229,844	1,188,391	2,005,193	1,192,084	916,596	157,528	66,595	-	6,756,231	1,231,283
Total	11,982,304	25,175,273	134,343,637	39,312,491	66,711,188	36,499,570	6,578,424	-	320,602,887	13,323,043
Deduct direct power investment, contra below	2,138,725	-	-	-	-	-	-	-	2,138,725	193,828
Deduct direct flood control investment, contra below	-	-	-	-	5,707,000	-	-	-	5,707,000	116,423
Add nonoverflow sections to replace other sections, contra below										
Power intake section	1,120,000	700,000	-	-	-	-	-	-	1,820,000	324,682
Lock section	480,000	950,000	-	-	-	-	-	-	1,430,000	240,442
Add sluiceway to replace power intake and water conductor, contra below	-	-	-	4,273,000	-	-	-	-	4,273,000	622,868
Total multiple-use facilities, allocated below; note 1, page 8	$11,443,579	$26,825,273	$134,343,637	$43,585,491	$61,004,188	$36,499,570	$6,578,424	$ -	$320,280,162	$14,200,784
Navigation facilities										
Lock and appurtenances	$ 9,458,833	$21,361,960	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,820,793	$ 6,184,772
Channel improvements	-	-	-	-	-	-	-	1,701,719	1,701,719	488,379
Deduct nonoverflow section to replace lock section, contra above	480,000	950,000	-	-	-	-	-	-	1,430,000	240,442
Total before allocation of multiple-use facilities	8,978,833	20,411,960	-	-	-	-	-	1,701,719	31,092,512	6,432,709
Add allocation of total multiple-use facilities shown above; note 1, page 8	7,438,326	22,813,557	24,181,855	-	-	-	-	-	54,433,738	3,507,255
Total navigation facilities after allocation	16,417,159	43,225,517	24,181,855	-	-	-	-	1,701,719	85,526,250	9,939,964
Flood control facilities										
Reservoir land and landrights	-	-	-	-	-	-	386,655	-	386,655	-
Structures and improvements	-	-	-	-	-	-	10,021	-	10,021	4,399
Dam structures and waterways	-	-	-	-	-	-	114,479	-	114,479	21,066
Reservoir facilities	-	-	-	-	-	-	1,839	-	1,839	335
Channel improvements	-	-	-	-	-	-	2,386,478	-	2,386,478	434,451
Total	-	-	-	-	-	-	2,899,472	-	2,899,472	460,251
Add direct flood control investment, contra above	-	-	-	-	5,707,000	-	-	-	5,707,000	116,423
Total before allocation of multiple-use facilities	-	-	-	-	5,707,000	-	2,899,472	-	8,606,472	576,674
Add allocation of total multiple-use facilities shown above; note 1, page 8	-	402,839	26,868,727	6,973,679	20,741,424	2,919,966	1,644,606	-	59,551,241	2,198,600
Total flood control facilities after allocation	-	402,839	26,868,727	6,973,679	26,448,424	2,919,966	4,544,078	-	68,157,713	2,775,274
Local economic development facilities										
Water supply	-	-	-	-	124,660	-	19,444	-	144,104	12,044
Add allocation of total multiple-use facilities shown above; note 1, page 8	-	-	6,717,182	9,588,808	8,540,586	22,994,729	4,933,818	-	52,775,123	2,708,917
Less reimbursement by local agencies	-	-	-	3,000,000	-	5,700,000	199,024	-	8,899,024	-
Total local economic development facilities after allocation and reimbursements	-	-	6,717,182	6,588,808	8,665,246	17,294,729	4,754,238	-	44,020,203	2,720,961
Recreation facilities										
Land and landrights	-	-	-	12,175	1,031,094	-	-	-	1,043,269	-
Other recreation plant	-	-	2,880,810	282,761	1,027,474	1,095,380	-	-	5,286,425	435,062
Add allocation of total multiple-use facilities shown above; note 1, page 8	-	-	48,363,709	24,407,875	31,722,178	10,584,875	-	-	115,078,637	4,387,065
Total recreation facilities after allocation	-	-	51,244,519	24,702,811	33,780,746	11,680,255	-	-	121,408,331	4,822,127
Power facilities										
Land and landrights	-	-	-	971,562	-	-	-	-	971,562	-
Powerhouse, including intake section	6,275,274	11,978,693	-	7,247,407	-	-	-	-	25,501,374	4,801,732
Turbines and generators	6,715,326	13,008,739	-	3,501,721	-	-	-	-	23,225,786	7,757,417
Accessory electrical equipment	763,423	1,313,478	-	794,183	-	-	-	-	2,871,084	1,049,207
Other power plant equipment	567,491	777,922	-	741,453	-	-	-	-	2,086,866	662,642
Total	14,321,514	27,078,832	-	13,256,326	-	-	-	-	54,656,672	14,270,998
Add direct power investment, contra above	2,138,725	-	-	-	-	-	-	-	2,138,725	193,828
Deduct nonoverflow section to replace power intake section, contra above	1,120,000	700,000	-	-	-	-	-	-	1,820,000	324,682
Deduct sluiceway to replace power intake and water conductor, contra above	-	-	-	4,273,000	-	-	-	-	4,273,000	622,867
Total before allocation of multiple-use facilities	15,340,239	26,378,832	-	8,983,326	-	-	-	-	50,702,397	13,517,277
Add allocation of total multiple-use facilities shown above; note 1, page 8	4,005,253	3,608,877	28,212,164	2,615,129	-	-	-	-	38,441,423	1,398,947
Total power facilities after allocation	19,345,492	29,987,709	28,212,164	11,598,455	-	-	-	-	89,143,820	14,916,224
Total	$35,762,651	$73,616,065	$137,224,447	$49,863,753	$68,894,416	$31,894,950	$9,298,316	$1,701,719	$408,256,317	
Accumulated depreciation	$ 8,048,942	$13,582,621	$ 2,275,426	$ 4,519,062	$ 3,223,876	$ 1,933,375	$1,102,869	$ 488,379		$35,174,550

Note:

a. Nickajack includes land and landrights in the amount of $1,299,481 acquired for retired Hales Bar project which is allocated on system basis.

(TVA p. 22)

(TVA p. 23)

APPENDIX I

TENNESSEE VALLEY AUTHORITY
SINGLE-PURPOSE POWER DAMS AND STEAM PRODUCTION PLANTS
SEPTEMBER 30, 1983

SCHEDULE A
PAGE 4

Single-purpose power dams	Raccoon Mountain	Apalachia	Fort Patrick Henry	Great Falls	Ocoee No. 3	Ocoee No. 2	Blue Ridge	Ocoee No. 1	Wilbur	Total
Assets										
Reservoir land and landrights, including relocations	$ 2,457,772	$ 775,306	$ 1,207,743	$ 702,114	$ 237,226	$ 20,252	$ 877,086	$ 230,409	$ 33,717	$ 6,541,625
Reservoir clearing	2,215,026	72,152	126,855	216,056	28,702	-	125,636	29,686	2,610	2,816,723
Structures and improvements	70,083,711	1,320,068	1,885,662	372,126	674,044	201,595	231,840	243,337	401,997	75,414,380
Dams and waterways	120,372,919	17,148,404	4,565,201	2,386,338	5,615,974	1,561,111	3,911,501	7,991,181	970,287	164,522,916
Turbines and generators	64,125,811	2,723,415	3,045,189	740,446	1,029,064	444,868	550,605	330,295	723,571	73,713,264
Accessory electric equipment	18,479,840	583,299	542,116	424,093	232,305	220,514	203,221	200,733	171,728	21,057,849
Other power plant equipment	5,267,630	297,510	274,290	133,550	178,797	101,867	61,637	114,541	84,437	6,514,259
Roads, railroads, and bridges	2,076,951	371,809	20,462	22,431	377,029	13,386	46,895	6,550	1,912	2,937,425
Village and reservoir facilities	2,355,537	817	16,278	5,877,009	-	-	32,346	11,162	6,617	8,299,766
Total single-purpose power dams	$287,435,197	$ 23,292,780	$ 11,683,796	$ 10,874,163	$ 8,373,141	$ 2,563,593	$ 6,040,767	$ 9,157,894	$ 2,396,876	$ 361,818,207
Accumulated depreciation	$ 25,974,284	$ 10,725,163	$ 4,940,906	$ 4,368,266	$ 4,141,652	$ 2,136,405	$ 2,773,762	$ 2,327,657	$ 1,350,519	$ 58,738,614

Steam production plants	Cumberland	Paradise	Widows Creek	Shawnee	Kingston	Johnsonville	Colbert	Gallatin	Bull Run	John Sevier	Watts Bar	Thomas H. Allen (note 9, page 12)	Total
Assets													
Land and landrights	$ 1,829,568	$ 716,336	$ 195,354	$ 504,507	$ 2,330,813	$ 108,467	$ 279,029	$ 690,082	$ 2,082,768	$ 1,491,572	$ 11,997	$ -	$ 10,240,493
Structures and improvements	85,362,079	61,193,171	45,066,066	48,717,984	38,011,082	41,267,693	32,939,685	28,373,734	28,494,509	22,928,829	4,424,579	3,368,320	440,147,731
Boiler plant equipment	422,820,092	356,811,202	255,165,893	186,935,265	169,565,685	185,285,221	173,692,330	134,514,413	115,631,531	63,583,153	11,256,426	23,770,122	2,099,031,333
Turbogenerators	69,426,534	107,591,883	75,706,536	80,045,157	69,868,987	63,819,319	77,707,477	48,917,136	29,742,939	32,697,353	6,273,948	17,744,990	679,542,259
Accessory electric equipment	48,545,508	27,463,501	25,824,584	16,841,256	15,041,584	23,769,209	18,798,757	11,118,760	10,989,962	7,170,211	1,783,066	1,093,073	208,439,471
Other power plant equipment	10,079,568	10,268,300	8,361,667	5,526,810	6,250,743	5,266,487	4,751,855	5,335,792	4,051,326	3,880,061	991,622	2,618,010	67,382,241
Total steam production plants	$638,063,349	$564,044,393	$410,320,100	$338,570,979	$301,068,894	$319,516,396	$308,169,133	$228,949,917	$190,993,035	$131,751,179	$24,741,638	$48,594,515	$3,504,783,528
Accumulated depreciation	$127,956,298	$159,031,347	$160,439,140	$168,351,010	$152,303,520	$121,531,613	$109,412,508	$ 81,795,200	$ 66,451,902	$ 72,890,630	$21,938,426	$14,345,311	$1,256,446,905

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
NUCLEAR PRODUCTION AND OTHER ELECTRIC PLANT
SEPTEMBER 30, 1983

SCHEDULE A
PAGE 5

	Browns Ferry	Sequoyah	Total
Nuclear production plants			
Assets			
Land and landrights	$ 890,269	$ 3,184,031	$ 4,074,300
Structures and improvements	200,988,143	407,204,049	608,192,192
Reactor plant equipment	334,524,167	725,183,231	1,059,707,398
Turbogenerators	256,872,115	275,073,597	531,945,712
Accessory electric equipment	109,041,164	199,428,023	308,469,187
Other power plant equipment	27,174,407	54,809,001	81,983,408
Total nuclear production plants	$929,490,265	$1,664,881,932	$2,594,372,197
Accumulated depreciation	$202,837,163	$ 106,523,696	$ 309,360,859

	Assets	Accumulated depreciation and depletion
Other electric plant		
Other production plant		
Gallatin gas turbines	$ 30,433,790	
Thomas H. Allen gas turbines	52,746,046	
Colbert gas turbines	43,612,825	
Johnsonville gas turbines	86,581,721	
	213,374,382	$ 74,701,756
System control center	47,217,827	7,413,543
Total other production plant	260,592,209	82,115,299
Transmission plant, including substations serving wholesale and industrial customers		
Land and landrights	86,831,118	
Structures and improvements	175,873,308	
Station equipment	748,613,579	
Towers and fixtures	319,860,236	
Poles and fixtures	80,743,820	
Overhead conductors and devices	386,954,432	
Roads and trails	241,998	
Total transmission plant	1,799,118,491	520,119,884
General plant		
Communication equipment	64,890,157	22,045,721
Coal land and landrights and mining equipment	149,732,131	2,949,293
Office and transportation equipment	112,883,601	28,163,534
Other, including land and landrights of $945,409	75,005,771	27,462,988
Total general plant	402,511,660	80,621,536
Plant leased to others, including land and landrights of $5,931,336	154,777,364	68,413,996
Plant held for future use		
Uranium land and landrights	124,654,802	
Coal land and landrights	159,219	
Other, including land and landrights of $10,123,054	15,196,670	
Total plant held for future use	140,010,691	6,406,386
Other physical property, including land and landrights of $931,616	4,123,102	3,191,487
Total other electric plant	$2,761,133,517	$760,868,588

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
OTHER PLANT
SEPTEMBER 30, 1983

	Assets	Accumulated depreciation and depletion
Single-purpose flood control plant, including land of $726,828	$ 2,065,257	$ 244,196
Recreation and environmental education plant		
Land Between The Lakes plant, including land of $33,888,958	71,499,126	8,100,994
Other recreation plant, including land of $412,478	5,083,201	845,315
Total recreation and environmental education plant	76,582,327	8,946,309
Chemical plant		
Land		
Phosphate land and mineral rights	819,772	
Other land and landrights	2,120	
Total land	821,892	190,814
Buildings and equipment		
Manufacturing plant and equipment		
Nitrogen facilities	61,225,462	
Ammonia from coal facilities	50,989,388	
	112,214,850	19,975,046
General service facilities		
Utility systems	21,829,510	
Other general facilities	12,163,991	
	33,993,501	16,160,416
Total buildings and equipment	146,208,351	36,135,462
Total chemical plant	147,030,243	36,326,276
General plant		
Land and landrights	842,862	
Land improvements	2,242,456	
Structures	24,948,681	
General utility systems	1,671,913	
Data processing equipment	789,520	
Engineering equipment	964,073	
Photographic and reproduction equipment	1,991,783	
Medical equipment	1,927,396	
Office furniture and equipment	3,200,644	
Transportation equipment	13,354,944	
Alterations to leased plant	871,355	
Environmental quality equipment	2,044,025	
Miscellaneous equipment	6,153,784	
Total general plant	61,003,436	29,916,922
Total other plant	$286,681,263	$75,433,703

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

CONSTRUCTION IN PROGRESS,
NUCLEAR FUEL, AND OTHER DEFERRED CHARGES

SEPTEMBER 30, 1983

SCHEDULE B

	Power program	All programs
ONSTRUCTION IN PROGRESS		
Construction in progress		
Generating facilities		
Watts Bar Nuclear Plant	$2,362,636,846	$2,362,636,846
Bellefonte Nuclear Plant	2,480,166,371	2,480,166,371
Total generating facilities	4,842,803,217	4,842,803,217
Transmission lines, substations, and other additions to power facilities	983,298,182	983,298,182
Pickwick new lock		116,629,894
Other navigation facilities		1,605,783
Multipurpose facilities		
Columbia Dam and Reservoir	-	75,909,914
Other	2,515,577	5,512,344
Total multipurpose facilities	2,515,577	81,422,258
Chemical plant		4,454,162
Recreation and environmental education facilities		
Land Between The Lakes		2,863,724
Other recreation facilities		2,160,271
Total recreation and environmental education facilities		5,023,995
General plant		
Coal gasification project	-	84,521,639
Ammonia from coal project	-	204,320
General construction equipment and materials	-	2,267,298
Other additions to general plant	8,053,246	13,331,933
Total general plant	8,053,246	100,325,190
Investigations for future power facilities	3,224,520	3,224,520
Total construction in progress	$5,839,894,742	$6,138,787,201
DEFERRED NUCLEAR GENERATING PROJECTS		
Hartsville Nuclear Plant A	$1,531,603,274	$1,531,603,274
Yellow Creek Nuclear Plant	1,135,447,966	1,135,447,966
Total deferred nuclear generating projects	$2,667,051,240	$2,667,051,240
NUCLEAR FUEL		
Nuclear fuel in process	$ 8,020,592	$ 8,020,592
Nuclear fuel in stock	32,739,171	32,739,171
Nuclear fuel in reactor	250,311,088	250,311,088
Spent nuclear fuel in cooling	166,167,848	166,167,848
	457,238,699	457,238,699
Less accumulated amortization	416,478,936	416,478,936
Total nuclear fuel	$ 40,759,763	$ 40,759,763
OTHER DEFERRED CHARGES		
Energy conservation costs	$ 68,102,359	$ 68,102,359
Spent nuclear fuel disposal costs	102,868,598	102,868,598
Mine and mill development costs		
Coal mine development and leases	85,632,489	85,632,489
Uranium mine and mill development and preoperations	181,828,133	181,828,133
Total mine and mill development costs	267,460,622	267,460,622
Total other deferred charges	$ 438,431,579	$ 438,431,579

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

DETAILS OF POWER EXPENSE

FOR THE YEAR ENDED SEPTEMBER 30, 1983

SCHEDULE C

PAGE 1

SUMMARY	Total	Provision for depreciation	Total before depreciation (exhibit II)	Operation		Maintenance	Other
				Fuel	Other		
Production							
Multipurpose dams							
Direct; page 30	$ 22,843,489	$ 5,675,032	$ 17,168,457	$ -	$ 8,598,571	$ 8,569,886	$ -
Multiple-use; schedule E	9,008,980	1,406,308	7,602,672	-	5,856,403	1,746,269	-
Single-purpose dams and pumped storage; page 32	14,296,777	6,698,516	7,598,261	-	4,017,986	3,580,275	-
Cumberland Basin projects; note a	14,414,405	-	14,414,405	-	-	-	14,414,405
Steam plants; page 34	1,536,027,588	94,079,303	1,441,948,285	1,215,135,920	84,335,788	142,476,577	-
Nuclear plants; page 36	392,883,680	75,246,227	317,637,453	142,462,128	94,492,745	80,682,580	-
Gas turbine plants; page 36	11,769,199	8,507,262	3,261,937	1,989,114	286,834	985,989	-
Total generation	2,001,244,118	191,612,648	1,809,631,470	1,359,587,162	197,588,327	238,041,576	14,414,405
Purchased power	8,582,211	-	8,582,211	-	-	-	8,582,211
Interchange power received	44,707,465	-	44,707,465	-	-	-	44,707,465
Interchange power delivered	130,859,945*	-	130,859,945*	-	-	-	130,859,945*
Power purchased and interchanged, net	77,570,269*	-	77,570,269*	-	-	-	77,570,269*
System control and load dispatching	7,579,020	1,315,979	6,263,041	-	-	-	6,263,041
Other	91,176,591	-	91,176,591	-	-	-	91,176,591
Total production	2,022,429,460	192,928,627	1,829,500,833	1,359,587,162	197,588,327	238,041,576	34,283,768
Transmission; page 36	92,060,104	43,615,638	48,444,466	-	26,265,658	22,178,808	-
Customer accounts; page 37	19,007,051	-	19,007,051	-	19,007,051	-	-
Demonstration of power use; page 37	35,048,321	-	35,048,321	-	35,048,321	-	-
Research, development, and demonstrations; page 37	61,461,770	-	61,461,770	-	61,461,770	-	-
Payments in lieu of taxes; note b	165,192,707	-	165,192,707	-	-	-	165,192,707
Administrative and general; page 37							
Direct	89,816,327	10,509,404	79,306,923	-	79,076,755	230,168	-
Multiple-use	51,511	-	51,511	-	51,511	-	-
Total operating expense	$2,485,067,251	$247,053,669	$2,238,013,582	$1,359,587,162	$418,499,393	$260,450,552	$199,476,475

SYSTEM STATISTICS	kWh generated less station use (thousands)	Production expense including depreciation		Installed capacity at September 30, 1983 (kilowatts)	Ratio of average gross generation to installed capacity (percent)
		Total	Per kWh (mills)		
Generation					
Multipurpose dams					
Direct; page 30	14,733,145	$ 22,843,489	1.550	3,064,090	55.21
Multiple-use; schedule E	-	9,008,980	.612	-	
Total multipurpose dams	14,733,145	31,852,469	2.162	3,064,090	55.21
Single-purpose dams; page 32	1,154,983	4,878,697	4.224	249,160	53.06
Pumped storage--Raccoon Mountain; page 33	381,304*	9,418,080	6.965	1,530,000	10.19
Cumberland Basin projects; note a	3,193,360	14,414,405	4.514	853,000	43.03
TAPOCO; note c	1,683,027			326,500	58.96
Nantahala; note c	113,708			-	
Total hydro generation	20,496,919			6,022,750	42.20
Steam plants; page 34	65,678,559	1,536,027,588	23.387	17,647,360	45.22
Nuclear plants; page 36	28,139,731	392,883,680	13.962	5,897,160	56.36
Gas turbine plants; page 36	16,199	11,769,199	726.539	2,510,000	.14
Total generation; note d	114,331,408			32,077,270	43.17
Purchased power	253,415	8,582,211			
Interchange power received	13,711,919	44,707,465			
System control and load dispatching		7,579,020			
Wheeling received; note e	1,263,627				
Other; note e		91,176,591			
Total system input	129,560,369				
Delivered under Alcoa Agreement	1,687,482*				
Interchange power delivered	17,460,172*	130,859,945*			
Wheeling delivered	1,223,492*				
Net energy supply	109,189,223	2,022,429,460	18.522		
Shop and internal uses	12,536*				
Transmission and transformation losses	2,942,912*				
Total kWh sales and production expense	106,233,775	$2,022,429,460	19.038		

Notes:

a. 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.

b. 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.

c. 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 are carried out by the company under TVA's direction. Under contract effective January 1, 1983, only four TAPOCO plants provide generation with eight Nantahala plants excluded.

d. Installed capacity decreased 86,375 kilowatts during fiscal year 1983. Additions consisted of 10,840 kilowatts from modification of four generators. A decrease of 97,215 kilowatts was due to expiration of 1962 agreement and new contract excluding Nantahala plants as a generation source.

e. TVA transmits (wheels) power and energy through its system for transactions from Big Rivers RECC and Southern Illinois Power Cooperative to Mississippi Power and Light. Wheeled losses for fiscal year 1983 totaled 40,135,000 kilowatthours.

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

SCHEDULE C
PAGE 2

	Total	Kentucky	Pickwick	Wilson	Wheeler	Guntersville	Nickajack	Chickamauga	Watts Bar	Fort Loudoun	Norris	Hiwassee	Cherokee	Chatuge	Nottely	Fontana	South Holston	Watauga	Douglas	Boone	Melton Hill	Tims Ford
Direct hydraulic production - multipurpose dams																						
Operation																						
Supervision and engineering	$ 1,129,719	$ 57,926	$ 58,383	$ 110,329	$ 148,452	$ 264,888	$ 37,975	$ 33,251	$ 117,040	$ 25,172	$ 21,315	$ 36,382	$ 66,962	$ 7,156	$ 7,150	$ 18,804	$ 10,049	$ 36,541	$ 44,314	$ 19,797	$ 11,018	$ 5,815
Hydraulic	40,090	927	18,242	9,398	6,009	4,082	-	-	1,209	-	6	-	217	-	-	-	-	-	-	-	-	-
Electric	4,630,246	281,048	296,032	653,083	448,721	257,797	160,233	266,413	349,478	215,512	207,669	112,022	209,330	32,254	33,711	159,296	92,791	223,763	222,675	202,926	114,762	90,730
Miscellaneous	2,798,516	188,896	200,515	450,801	241,760	159,197	72,146	205,089	203,114	166,215	80,963	106,723	142,910	19,886	21,000	104,702	26,922	130,388	111,750	58,725	68,464	38,350
Total operation	8,598,571	528,797	573,172	1,223,611	844,942	685,964	270,354	504,753	670,841	406,899	309,953	255,127	419,419	59,296	61,861	282,802	129,762	390,692	378,739	272,448	194,244	134,895
Maintenance																						
Supervision and engineering	696,970	62,371	71,250	101,583	61,915	56,270	31,912	42,306	44,964	31,757	17,407	11,005	15,525	6,647	6,623	29,613	12,811	12,751	28,543	24,921	16,437	10,359
Structures	727,696	45,293	26,403	159,485	52,473	36,397	7,373	78,650	51,043	100,684	33,219	16,471	33,598	5,535	7,313	9,797	2,578	5,791	28,081	14,532	11,692	1,288
Reservoirs, dams, and waterways	314,132	2,822	2,408	22,506	3,401	1,013	2,446	7,365	65,132	73,560	975	4,299	28,563	16,191	41,650	11,010	1,270	14,619	257	1,888	12,576	181
Electric plant	6,124,632	90,282	106,229	799,202	265,824	86,065	541,337	252,598	1,856,605	83,259	94,513	51,569	87,488	15,006	24,341	103,086	49,101	14,045	1,391,385	161,018	44,719	6,960
Miscellaneous plant	706,456	110,285	36,453	149,688	35,520	18,137	15,701	29,281	54,921	85,889	9,385	19,181	26,668	1,848	5,450	24,174	2,791	28,978	16,591	15,887	16,442	3,186
Total maintenance	8,569,886	311,053	242,743	1,232,464	419,133	197,882	598,769	410,200	2,072,665	375,149	155,499	102,525	191,842	45,227	85,377	177,680	68,551	76,184	1,464,857	218,246	101,866	21,974
Provision for depreciation	5,675,032	342,833	408,629	969,653	723,042	242,867	440,793	265,433	269,242	243,608	92,797	167,563	186,764	33,692	40,004	248,479	89,256	140,397	204,335	182,474	238,280	144,891
Total	$22,843,489	$1,182,683	$1,224,544	$3,425,728	$1,987,117	$1,126,713	$1,309,916	$1,180,386	$3,012,748	$1,025,656	$558,249	$525,215	$798,025	$138,215	$187,242	$708,961	$287,569	$607,273	$2,047,931	$673,168	$534,390	$301,760
kWh generated less station use (thousands)	14,733,145	1,122,822	1,375,423	2,897,985	1,519,986	789,422	703,472	833,297	1,012,801	943,804	467,961	299,639	383,381	35,874	40,493	1,053,750	135,375	201,463	464,481	211,134	166,237	74,345
Total production expense including depreciation per kWh (mills)	1.550	1.053	.890	1.182	1.307	1.427	1.862	1.417	2.975	1.087	1.193	1.753	2.082	3.853	4.624	.673	2.124	3.014	4.409	3.188	3.215	4.059
Installed capacity at September 30, 1983 (kilowatts); note d, page 29	3,064,090	175,000	224,080	629,840	367,200	115,200	103,950	120,000	166,500	139,140	100,800	117,100	135,180	10,000	15,000	238,500	35,000	57,600	120,600	76,400	72,000	45,000
Ratio of average gross generation to installed capacity (percent)	55.21	73.39	70.56	52.68	47.56	78.45	77.40	79.59	69.64	77.59	53.17	31.94	32.58	41.21	31.08	50.53	44.30	40.10	44.16	32.24	26.50	19.00

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1982

SCHEDULE C
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		Single-Purpose Dams								
Hydraulic production - single-purpose dams and pumped storage	Total	Apalachia	Fort Patrick Henry	Great Falls	Ocoee No. 3	Ocoee No. 2	Blue Ridge	Ocoee No. 1	Wilbur	Raccoon Mountain
Operation										
Supervision and engineering	$ 165,266	$ 35,497	$ 11,493	$ 37,573	$ 16,503	$ 15,038	$ 1,533*	$ 42,926	$ 7,769	$ 111,640
Hydraulic	61,008	4,096	8,050	22,196	6,431	786	2,420	12,761	4,268	35,043
Electric	1,280,077	117,443	90,671	393,829	63,136	156,357	42,823	367,656	48,162	630,234
Miscellaneous	581,843	43,364	167,423	75,329	36,599	78,952	40,664	120,756	18,756	1,152,875
Total operation	2,088,194	200,400	277,637	528,927	122,669	251,133	84,374	544,099	78,955	1,929,792
Maintenance										
Supervision and engineering	165,958	7,511	22,608	22,290	14,205	26,981	36,370	16,500	19,493	123,068
Structures	134,787	7,377	7,372	27,448	553	29,644	3,864	56,947	1,582	108,873
Reservoirs, dams, and waterways	563,128	18,971	4,589	68,241	2,907	440,800	13,319	2,491	11,810	12,136
Electric plant	741,042	108,677	118,546	55,343	87,771	216,586	19,114	34,235	100,770	1,517,028
Miscellaneous plant	140,045	9,616	59,204	11,146	8,768	36,480	2,745	9,690	2,396	74,210
Total maintenance	1,744,960	152,152	212,319	184,468	114,204	750,491	75,412	119,863	136,051	1,835,315
Provision for depreciation	1,045,543	282,486	159,691	179,432	106,846	2,051	69,983	207,336	37,718	5,652,973
Total	$4,878,697	$635,038	$649,647	$892,827	$343,719	$1,003,675	$229,769	$871,298	$252,724	$9,418,080
kWh generated less station use (thousands)	1,154,983	511,212	126,941	159,728	188,689	303*	49,747	83,507	35,462	381,304*
Total production expense including depreciation per kWh (mills)	4.224	1.242	5.118	5.590	1.822	-	4.619	10.434	7.127	6.965[a]
Installed capacity at September 30, 1983 (kilowatts)	249,160	82,800	36,000	31,860	28,800	21,000	20,000	18,000	10,700	1,530,000
Ratio of average gross generation to installed capacity (percent)	53.06	70.57	40.49	57.41	74.92	-	28.49	53.17	38.03	10.19

a. Excludes kWh used in pumping.

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

Steam production	Total	Cumberland	Paradise	Widows Creek	Shawnee	Kingston	Johnsonville	Colbert	Gallatin	Bull Run	John Sevier	Watts Bar	Thomas H. Allen (note 9, page 12)
Operation													
Supervision and engineering	$ 10,622,071	$ 1,204,541	$ 1,314,616	$ 948,459	$ 908,309	$ 959,502	$ 844,802	$ 847,714	$ 942,882	$ 791,069	$ 952,327	$ 178,656	$ 729,194
Fuel	1,215,135,920	257,192,992	108,213,130	93,332,043	126,346,813	115,031,927	62,960,458	111,289,531	102,306,613	102,191,392	73,176,172	115,775	62,979,074
Steam	30,539,179	2,934,636	3,014,832	4,555,867	3,460,668	3,308,704	2,973,111	3,044,359	2,192,849	1,516,101	1,744,797	248,739	1,544,516
Electric	12,343,462	941,751	1,212,712	1,056,330	1,518,473	1,498,944	1,423,394	1,367,607	1,037,983	768,022	805,752	122,565	589,929
Miscellaneous	23,931,076	2,708,638	3,960,630	2,094,324	1,818,684	2,034,719	1,886,703	2,176,063	2,159,260	1,624,194	1,607,792	404,760	1,455,309
Rent	6,900,000	-	-	-	-	-	-	-	-	-	-	-	6,900,000
Total operation	1,299,471,708	264,982,558	117,715,920	101,987,023	134,052,947	122,833,796	70,088,468	118,725,274	108,639,587	106,890,778	78,286,840	1,070,495	74,198,022
Maintenance													
Supervision and engineering	6,851,495	941,170	1,117,247	603,207	709,867	490,032	510,502	552,672	489,896	557,072	406,283	105,297	368,250
Structures	7,788,609	771,417	1,056,193	640,936	623,939	526,311	546,554	616,705	903,992	492,179	801,872	203,361	605,150
Boiler plant	90,840,206	10,269,890	18,996,839	12,410,358	6,357,625	8,848,683	3,928,423	9,943,607	6,151,942	4,700,624	5,184,304	397,079	3,650,832
Electric plant	29,135,009	2,193,888	6,157,390	3,895,623	2,901,157	3,159,847	3,098,484	2,318,867	1,444,466	775,746	2,388,678	81,880	718,983
Miscellaneous plant	7,861,258	928,313	1,365,671	589,337	478,665	659,655	455,531	1,031,317	623,937	609,760	442,773	41,571	434,728
Total maintenance	142,476,577	15,104,678	28,693,340	18,139,461	11,071,253	13,684,528	8,539,494	14,463,168	9,614,233	7,135,381	9,423,910	829,188	5,777,943
Provision for depreciation	94,079,303	17,962,758	12,640,193	11,696,192	9,575,582	8,428,142	8,888,624	7,404,780	6,501,719	5,183,616	3,712,463	717,068	1,368,166
Total	$1,536,027,588	$298,049,994	$159,049,453	$131,822,676	$154,699,782	$144,946,466	$87,516,586	$140,593,222	$124,755,539	$119,209,775	$91,423,213	$2,616,751	$81,344,131
kWh generated less station use (thousands)	65,678,559	13,291,614	7,205,223	4,713,534	5,199,822	6,011,887	3,889,268	5,380,076	6,076,080	5,976,056	4,248,798	1,501	3,684,680
Total production expense including depreciation per kWh (mills)	23.387	22.424	22.074	27.967	29.751	24.110	22.502	26.132	20.532	19.948	21.517	1,743.338	22.076
Installed capacity at September 30, 1983 (kilowatts)	17,647,360	2,600,000	2,558,200	1,968,760	1,750,000	1,700,000	1,485,200	1,350,000	1,255,200	950,000	800,000	240,000	990,000
Ratio of average gross generation to installed capacity (percent)	45.22	61.12	33.99	29.06	36.91	43.62	32.61	48.69	59.13	74.38	64.28	.26	46.13

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

	Allen	Colbert	Gallatin	Johnsonville	Total
Gas turbine production					
Fuel expense	$ 717,944	$ 811,006	$ 88,875	$ 371,289	$ 1,989,114
Other operating expense	120,795	93,165	29,452	43,422	286,834
	838,739	904,171	118,327	414,711	2,275,948
Maintenance	522,106	276,738	93,599	93,546	985,989
Provision for depreciation	2,097,900	1,728,741	1,217,352	3,463,269	8,507,262
Total	$3,458,745	$2,909,650	$1,429,278	$3,971,526	$11,769,199
kWh generated less station use (thousands)	9,573	5,627	428*	1,427	16,199
Total production expense including depreciation per kWh (mills)	361.302	517.087	-	2,783.130	726.539
Installed capacity at September 30, 1983 (kilowatts)	620,800	476,000	325,200	1,088,000	2,510,000
Ratio of average gross generation to installed capacity (percent)	.23	.19	.07	.08	.14

	Browns Ferry	Sequoyah	Total
Nuclear production			
Operation			
Supervision and engineering	$ 19,937,946	$ 19,751,105	$ 39,689,051
Fuel	76,892,435	65,569,693	142,462,128
Coolants and water	534,889	1,750,624	2,285,513
Steam	14,143,590	6,830,223	20,973,813
Electric	1,938,977	1,543,911	3,482,888
Miscellaneous	18,249,066	9,812,414	28,061,480
Total operation	131,696,903	105,257,970	236,954,873
Maintenance			
Supervision and engineering	13,820,919	4,615,074	18,435,993
Structures	2,661,000	2,116,698	4,777,698
Reactor plant	24,474,198	12,903,463	37,377,661
Electric plant	7,860,861	5,138,458	12,999,319
Miscellaneous plant	4,551,232	2,540,677	7,091,909
Total maintenance	53,368,210	27,314,370	80,682,580
Provision for depreciation	27,289,074	47,957,153	75,246,227
Total	$212,354,187	$180,529,493	$392,883,680
kWh generated less station use (thousands)	16,115,228	12,024,503	28,139,731
Total production expense including depreciation per kWh (mills)	13.177	15.013	13.962
Installed capacity at September 30, 1983 (kilowatts)	3,456,000	2,441,160	5,897,160
Ratio of average gross generation to installed capacity (percent)	54.89	58.45	56.36

Transmission	
Operation	
Supervision and engineering	$ 6,270,097
Load dispatching	3,036,188
Stations	6,612,506
Overhead lines	1,124,432
Miscellaneous	5,429,206
Rents	3,793,229
Total operation	26,265,658

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF POWER EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

Transmission - continued		
Maintenance		
Supervision and engineering		$ 785,489
Structures		972,204
Station equipment		11,484,926
Overhead lines		8,070,891
Miscellaneous plant		865,298
Total maintenance		22,178,808
Total		$48,444,466
Customer accounts		
Meter reading		$ 305,936
Customer records and collections		549,297
Uncollectible accounts		18,118,868
Miscellaneous		32,950
Total		$19,007,051
Demonstration of power use		
Supervision and general		$ 4,174,967
Commercial and industrial		901,775
Residential conservation/demonstration		3,631,175
Load management		2,784,541
Solar applications and demonstrations		3,100,640
Amortization--deferred conservation cost		19,797,237
Industrial marketing		1,237,134
		35,627,469
Less reimbursements from power distributors for technical advisory services		579,148
Total		$35,048,321
Research, development, and demonstrations		
Transmission		$ 2,780,280
Demonstration of power use		2,339,149
Administrative and general		6,107,358
Amortization--deferred conservation cost		10,500,403
Other		39,734,580
Total		$61,461,770
Administrative and general		
Direct		
Operation		
Salaries	$15,493,577	
Office supplies and expenses	3,545,060	$19,038,637
Less transfers to construction and other accounts		530,195
		18,508,442
Outside services employed		290,998
Property insurance		9,657,313
Injuries and damages		971,430
Employee pensions and benefits		53,315*
Miscellaneous		21,767,669
Rents		2,642,573
Electricity used by shops and laboratories		521,780*
Total operation		53,263,330
Maintenance		
General property		230,168
Total direct		53,493,498
Allocation from nonpower divisions		
TVA general offices		
Direct; schedule F	25,813,425	
Multiple-use; schedule E	51,511	25,864,936
Total administrative and general charged to power operations		$79,358,434

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

SCHEDULE D
PAGE 1

	Direct	Multiple-use (schedule E)	Total
GENERAL RESOURCES DEVELOPMENT			
Navigation operations			
Studies and investigations			
Navigation engineering and investigations	$ 484,652	$ -	$ 484,652
General and administrative expenses	12,688	-	12,688
	497,340	-	497,340
Operation and maintenance of facilities			
Operation	180,251	4,065,406	4,245,657
Maintenance	1,030,880	1,235,408	2,266,288
General and administrative expenses	-	37,643	37,643
Provision for depreciation	491,211	1,098,767	1,589,978
Total expense of navigation operations	$2,199,682	$6,437,224	8,636,906
System flood control operations			
Studies and investigations			
System studies and investigations	$ 476,929	$ -	476,929
General and administrative expenses	3,652	-	3,652
	480,581	-	480,581
Operation and maintenance of facilities			
Operation	-	5,603,172	5,603,172
Maintenance	-	1,482,702	1,482,702
General and administrative expenses	-	51,511	51,511
Provision for depreciation	380,409	1,230,517	1,610,926
Total expense of system flood control operations	$ 860,990	$8,367,902	9,228,892
Recreation development			
Recreation development	$ 910,169	$ -	910,169
General and administrative expenses	11,954	-	11,954
	922,123	-	922,123
Operation and maintenance of facilities			
Operation and maintenance	-	6,035,135	6,035,135
General and administrative expenses	-	53,492	53,492
Provision for depreciation	273,183	648,999	922,182
Total expense of recreation development	$1,195,306	$6,737,626	7,932,932
Community preparedness			
Community preparedness	$2,264,883	$ -	2,264,883
General and administrative expenses	22,247	-	22,247
	2,287,130	-	2,287,130
Operation and maintenance of facilities			
Operation and maintenance	-	831,438	831,438
General and administrative expenses	-	3,962	3,962
Provision for depreciation	3,311	323,960	327,271
Total expense of community preparedness	$2,290,441	$1,159,360	3,449,801
Regional water quality management			
Regional water quality management			1,612,069
Provision for depreciation			51,679
General and administrative expenses			10,735
Total expense of regional water quality management			1,674,483
Fisheries and wildlife resources development			
Fisheries resources development			802,814
Wildlife resources development			902,570
Provision for depreciation			76,879
General and administrative expenses			11,461
Total expense of fisheries and wildlife resources development			1,793,724

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

SCHEDULE D
PAGE 2

GENERAL RESOURCES DEVELOPMENT - continued	
Environmental protection of public lands and water	
Environmental protection of public lands and water	$ 955,871
General and administrative expenses	7,954
Total expense of environmental protection of public lands and water	963,825
Environmental education	
Environmental education	608,561
Provision for depreciation	9,733
General and administrative expenses	6,314
Total expense of environmental education	624,608
Valley agricultural development	
Farm resource management and fertilizer use	2,841,381
Program planning and analysis	348,443
Agricultural waste heat and energy applications	425,605
Developing specialty enterprises for the rural poor	1,048,224
Market development	313,682
Provision for depreciation	196,830
General and administrative expenses	129,121
Net expense of Valley agricultural development	5,303,286
Renewable fuels research	
Renewable fuels research	1,877,560
General and administrative expenses	92,254
Total expense of renewable fuels research	1,969,814
Forest resources development	
Forest resources development	1,484,502
Provision for depreciation	7,997
General and administrative expenses	12,952
Total expense of forest resources development	1,505,451
Acidic precipitation assessment	
Acidic precipitation assessment	306,730
General and administrative expenses	1,751
Total expense of acidic precipitation assessment	308,481
TVA lands planning	
TVA lands planning	721,919
General and administrative expenses	6,220
Total expense of TVA lands planning	728,139
Townlift	
Townlift	1,169,447
General and administrative expenses	9,396
Total expense of townlift	1,178,843
Industrial skills development	
Industrial skills development	2,133,028
General and administrative expenses	19,036
Total expense of industrial skills development	2,152,064
Economic development and analysis	
Economic development and analysis	3,175,826
General and administrative expenses	21,720
Total expense of economic development and analysis	3,197,546

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

GENERAL RESOURCES DEVELOPMENT - continued	
Waterway development and engineering assistance	
Waterway development and engineering assistance	$ 1,733,083
General and administrative expenses	11,013
Total expense of waterway development and engineering assistance	1,744,096
Special opportunities cities and counties program	
Special opportunities cities and counties program	2,183,027
General and administrative expenses	21,368
Total expense of special opportunities cities and counties program	2,204,395
Minority economic development	
Minority economic development	2,227,177
General and administrative expenses	17,584
Total expense of minority economic development	2,244,761
Floodplain management	
Floodplain management	2,549,869
Provision for depreciation	13,496
General and administrative expenses	15,340
Total expense of floodplain management	2,578,705
Land Between The Lakes operations	
Land Between The Lakes operations	7,529,182
Provision for depreciation	918,196
General and administrative expenses	66,758
Total expense of Land Between The Lakes operations	8,514,136
Valley mapping and remote sensing	
Valley mapping and remote sensing	1,014,799
Provision for depreciation	24,379
General and administrative expenses	7,593
Total expense of Valley mapping and remote sensing	1,046,771
Other general resources development projects	
Regional air quality management	586,967
General and administrative expenses	5,442
Total expense of other general resources development projects	592,409
Total expense of general resources development	$69,574,068
FERTILIZER DEVELOPMENT	
Research and development	
Chemical fertilizer research and development	$10,440,111
Soils and fertilizer research	3,082,533
Development of ammonia from coal process	3,234,321
Provision for depreciation	1,028,289
General and administrative expenses	550,371
Total expense of research and development	18,335,625
Fertilizer introduction	
Fertilizer industry demonstrations	3,457,561
Farm test demonstrations outside the Valley	1,831,224
General and administrative expenses	140,764
Net expense of fertilizer introduction	5,429,549

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
DETAILS OF NONPOWER NET EXPENSE
FOR THE YEAR ENDED SEPTEMBER 30, 1983

FERTILIZER DEVELOPMENT - continued	
Developmental production	
Cost of products distributed	
Materials used	$ 12,553,738
Direct manufacturing and shipping expense	14,493,147
Indirect manufacturing and shipping expense	3,141,638
Provision for depreciation and depletion	2,811,840
Finished inventory changes	3,679,634
Total cost of products distributed	36,679,997
General expenses	
Gain on sale of phosphate reserves, net	180,587*
Loss on retirements of manufacturing plant and equipment, net	144,741
Other general expenses	
General and administrative expenses	925,497
Provision for depreciation of idle manufacturing plant and equipment	283,798
Other, including depreciation of $3,725	1,440,537
Total general expenses	2,613,986
Total production expense	39,293,983
Less transfers and sales of products	
Transfers to TVA programs, at market prices	20,311,867
Direct sales	361,749
Total transfers and sales	20,673,616
Net expense of developmental production	18,620,367
Net expense of fertilizer development	$ 42,385,541
NATIONAL ENERGY DEMONSTRATIONS	
Solar energy demonstrations	$ 307,047
Fuel cells	74,458
Atmospheric fluidized bed combustion demonstration	350,000*
Total expense of national energy demonstrations	$ 31,505
OTHER EXPENSE OR INCOME	
Adjustment to accrued leave	$ 1,952,710*
World's Fair exhibit	1,235
Southeastern regional library demonstration	49,386
Gain on disposal of general property	15,000*
Maintenance of bridges financed by others on TVA dams	542,706
Emergency preparedness and other miscellaneous expenses	9,246
Interest income from receivables	85,650*
Other expense, net	$ 1,450,787*
NET EXPENSE	$110,540,327

*Deduct

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APPENDIX I

TENNESSEE VALLEY AUTHORITY

SCHEDULE E

OPERATING EXPENSES OF MULTIPLE-USE FACILITIES

FOR THE YEAR ENDED SEPTEMBER 30, 1983

Expenses	
Operation	
Water control operations	$ 2,294,048
Water control investigations	1,046,593
Investigations and control of reservoir ecology	2,658,534
Reservoir release improvements	1,230,338
Plant protection and services to visitors	3,525,866
Operation and upkeep of dam reservations	3,195,554
Operation of reservoir lands	6,800,148
Development of water resource management methods	633,079
Central services expenses	312,594
Total operation	21,696,754
General and administrative expenses	198,119
Maintenance	5,159,179
Provision for depreciation	4,708,551
Total	$31,762,603

	Operation	General and administrative	Maintenance	Depreciation	Total
Distributed to					
Power operations	$ 5,856,403	$ 51,511	$1,746,269	$1,406,308	$ 9,060,491
Navigation operations	4,065,406	37,643	1,235,408	1,098,767	6,437,224
Flood control operations	5,603,172	51,511	1,482,702	1,230,517	8,367,902
Recreation development	5,687,192	53,492	347,943	648,999	6,737,626
Community preparedness	484,581	3,962	346,857	323,960	1,159,360
Total	$21,696,754	$198,119	$5,159,179	$4,708,551	$31,762,603

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APPENDIX I

TENNESSEE VALLEY AUTHORITY
GENERAL AND ADMINISTRATIVE EXPENSES
FOR THE YEAR ENDED SEPTEMBER 30, 1983

SCHEDULE F

Expenses	
Board of directors	$ 550,911
Office of the general manager	1,803,584
Planning and budget staffs	2,893,086
Washington office	722,526
Information office	4,797,906
District offices	1,188,770
Citizen action office	569,869
Equal employment opportunity staff	2,442,161
Office of audit and evaluation	3,728,676
Division of the comptroller	15,984,814
Office of the general counsel	6,993,525
Environmental quality staff	1,684,051
Other general and administrative	231,321
Total	$43,591,200

	Amount	Percent of total
Distributed to		
Construction and investigations in progress	$14,852,990	34.07
Recovered through services billed to others	576,753	1.32
Expense of programs		
Power	25,813,425	59.22
Navigation	12,688	.03
System flood control	3,652	.01
Environmental protection of public lands and waters	7,954	.02
Regional water quality management	10,735	.02
Fisheries resources development	5,314	.01
Wildlife resources development	6,147	.01
TVA lands planning	6,220	.01
Recreation development	11,954	.03
Environmental education	6,314	.01
Valley agricultural development	129,121	.30
Forest resources development	12,952	.03
Acidic precipitation assessment	1,751	-
Industrial skills development	19,036	.04
Economic development and analysis	21,720	.05
Renewable fuels research	92,254	.21
Community preparedness	22,247	.05
Townlift	9,396	.02
Waterway development and engineering assistance	11,013	.03
Minority economic development	17,584	.04
Regional air quality management	5,442	.01
Special opportunities cities and counties	21,368	.05
Floodplain management	15,340	.04
Land Between The Lakes operations	66,758	.15
Valley mapping and remote sensing	7,593	.02
Multipurpose reservoir operations	198,119	.46
Fertilizer development		
Developmental production	925,497	2.12
Research and development	399,547	.92
Ammonia from coal	150,823	.35
Fertilizer introduction		
Farm test demonstrations	46,074	.11
Fertilizer industry demonstrations	94,690	.22
National energy demonstrations	8,729	.02
Total	$43,591,200	100.00

(916123)

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