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United States  
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Rural  
Electrification  
Administration

REA Bulletin 800-1

February 1990

# A Brief History of the Rural Electric and Telephone Programs

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20250

February 21, 1990

Honorable Jamie L. Whitten  
Chairman, Committee on Appropriations  
House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

As you requested, enclosed is a summary of the legislative history and accomplishments of the Rural Electrification and Telephone programs for your use in review of the Fiscal Year 1991 Budget Proposals.

Sincerely,

A handwritten signature in cursive script that reads "Jack Van Mark".

JACK VAN MARK  
Acting Administrator



## REA Brief History of the Rural Electrification and Telephone Programs

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- B. Chronology of Legislative Changes
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## HISTORY

The Rural Electrification Administration (REA) is a credit agency of the U.S. Department of Agriculture which assists rural electric and telephone organizations in obtaining the financing required to provide electric and telephone service in rural areas. These essential services help improve the quality of life for people who live, work, or do business throughout rural America. Financial assistance may include (a) loans from REA, (b) guarantees of loans made by others, and (c) REA approval of security arrangements which permit the borrower to obtain financing from other lenders without a guarantee.

REA was first established by Executive Order 7037 on May 11, 1935, as part of a general program of unemployment relief. It soon became clear, however, that the task of extending central station electric service to rural areas required very specialized skills (engineering, management, etc.) that would be difficult to attract if REA operated under the constraints of the unemployment relief authorization. REA was given its own statutory authorization by the Rural Electrification Act of May 20, 1936. It became a part of the U.S. Department of Agriculture on July 1, 1939.

Federal support was needed to electrify rural America because most of the established utilities served high density areas and did not extend lines to farmers and other rural residents because such investments were not considered to be feasible.

When Congress established REA, its purpose was to assure that funds would be available for rural electrification. Loans were made at interest rates that fluctuated with the cost of money to the Government. It was not until 1944 that Congress established a fixed interest rate of 2 percent, which, at that time, was the approximate cost of money to the Government. As time went by and interest rates rose, the subsidy associated with REA loans grew. The performance of the difficult tasks involved with the initial organizing and constructing of rural electric systems was made possible by the availability of capital from REA, innovative construction techniques and the establishment of cooperatives—not by subsidized interest rates.

The purpose of REA was expanded in 1949 when REA was authorized to loan funds for telephone service in rural areas. As in the case of electricity, it became clear that rural residents would not have access to adequate and dependable telephone service unless Federal support was provided. Both the rural Telephone and rural Electric programs of REA have been successful in achieving their goals.

During the late 1960's and early 1970's, rural electric and telephone leaders came to realize that (a) their capital needs were growing at a very rapid rate and would very likely continue to grow, (b) it was no longer reasonable to expect the Government to meet all of their growing capital needs, and (c) they had developed sufficient financial strength to obtain a portion of their capital needs from private sources. For these reasons, supplemental sources of financing were developed for both rural electric and telephone utilities.

The National Rural Utilities Cooperative Finance Corporation (CFC) was formed in 1969 by the rural electric cooperatives. It obtains funds from the private credit markets for its loans to electric systems. As of December 31, 1987, CFC had provided more than \$4.0 billion in long-term loans to its membership, which includes 889 systems. In addition to CFC, rural electric systems obtain loan funds from the Banks for Cooperatives and other private sources.

The Rural Telephone Bank (RTB) was established in 1971 by Public Law 92-12 which amended the Rural Electrification Act. It is the primary supplemental source of financing for the growing capital needs of rural telephone systems.

The Rural Telephone Bank is managed by a 13-member board of directors. The Administrator of REA serves as Governor of the Bank until conversion to private ownership, control, and operation. This will take place when 51 percent of the Class A stock issued to the United States and outstanding at any time after September 30, 1985, has been fully redeemed and retired. The Bank board holds at least four regularly scheduled meetings a year. Activities of the Bank are carried out by REA employees and the Office of the General Counsel of the U.S. Department of Agriculture.

In 1973, a major amendment to the Rural Electrification Act established the "Rural Electrification and Telephone Revolving Fund" (RETRF) for the purpose of making loans to REA electric and telephone borrowers. The amended Act established that loans to be made from the RETRF would be at a standard rate of 5 percent instead of the 2 percent rate at which REA loans had previously been made. The 2 percent rate was retained as a special rate for borrowers that met criteria specified in the Act. It was also available, at the Administrator's discretion, for hardship cases.

In addition to establishing the RETRF, and increasing the interest rate of REA loans, the 1973 amendment authorized REA to guarantee loans made by other lenders. Today these loan guarantees account for most of the loan funds obtained by electrification borrowers.

The Legislation adopted in 1973 contained a statement whereby Congress declared that it is its policy that "rural electric and telephone systems should be encouraged and assisted to develop their resources and ability to achieve the financial strength needed to enable them to satisfy their credit needs from their own financial organizations and other sources...."

In 1981, Congress further amended the RE Act by eliminating the special 2 percent interest rate on loans to rural electric and telephone systems. Such utilities now receive loans at 5 percent from the RETRF, as do other borrowers. Exceptions to the 5 percent rate may still be made at the discretion of the REA Administrator where there is a finding of hardship.

A 1986 amendment to the RE Act authorized, through September 30, 1987, prepayment of certain REA guaranteed Federal Financing Bank Loans, as well as, the sale or prepayment of REA direct or insured loans, at discount, by the borrower. Another 1986 amendment established a privatization demonstration program which allowed Alaska borrowers to prepay all of their REA, RTB or REA guaranteed borrowings,

In 1987 Congress amended the RE Act to extend the prepayment of FFB loans through September 30, 1988, and authorized the prepayment of RTB loans at face value without a prepayment premium during fiscal year 1988. In addition electric borrowers were authorized to use their own funds for investments without prior Administrator approval for amounts not in excess of 15 percent of their total utility plant. A new grant or zero interest rate loan program was established to promote rural economic development. Another amendment established a formula for determining the RTB interest rate.

During fiscal year 1987, a total of 50 rural electric and telephone borrowers retired their REA debt under the prepayment program authorized under the Omnibus Budget Reconciliation Act of 1986. This resulted in the return to the federal Treasury \$429 million in advance of loan payment due dates.

During fiscal year 1988, six power supply borrowers prepaid \$2 billion in long-term high interest-rate loans held by the Federal Financing Bank. The prepayments were funded by private-sector loans with an REA guarantee.

**CHRONOLOGY OF LEGISLATIVE CHANGES**  
**Rural Electrification Act of 1936**  
**7 U.S.C. 901-950b**

- 1935      The Rural Electrification Administration was created by Executive Order 7037 of May 11 under authority of the Emergency Relief Appropriation Act of 1935, approved April 8, 1935 (49 Stat. 115).
- 1936      Statutory provision for the Agency was made in the Rural Electrification Act of 1936, approved May 20 (49 Stat. 1363; 7 U.S. Code, Chapter 31).
- 1938      Title IV of the Work Relief and Public Works Appropriation Act of 1938, approved June 21 ("RE Act of 1938," 52 Stat. 818) authorized further borrowing from the Reconstruction Finance Corporation and added a requirement that borrowers from REA agree to use materials and supplies produced in the United States.
- 1939      REA became part of the Department of Agriculture under Reorganization Plan II, effective July 1.
- 1944      Title V of the Department of Agriculture Organic Act of 1944, approved September 21 (58 Stat. 739; 7 U.S.C. 903 - 905; 915) liberalized the terms of REA loans and removed the time limitation from its lending program.
- 1944      On December 23, the Rural Electrification Act was further amended to authorize REA to refinance certain rural electrification obligations owed to the Tennessee Valley Authority (58 Stat. 925; 7 U.S.C. 904).
- 1947      The Department of Agriculture Appropriation Act, 1948, approved July 30, (61 Stat. 546; 7 U.S.C. 903) further amended the Rural Electrification Act by transferring from the Reconstruction Finance Corporation to the Secretary of the Treasury the authority to make loans to REA.
- 1948      On June 29, the Rural Electrification Act was again amended to authorize REA to refinance certain additional rural electrification obligations owed to the Tennessee Valley Authority (62 Stat. 1070; 7 U.S.C. 904).
- 1949      On October 28, the Rural Electrification Act was further amended to authorize REA to make loans for the purpose of furnishing and improving rural telephone service (63 Stat. 948; 7 U.S.C. 901 - 914; 922 - 924).
- 1955      On June 15, the Rural Electrification Act was amended by revising the formula governing the allotment of electrification loan funds (69 Stat. 131; 7 U.S.C. 903; 904).
- 1962      On October 23, the Rural Electrification Act was amended by broadening the definition of telephone service (76 Stat. 1140; 7 U.S.C. 924).



- 1971 On May 7, the Rural Electrification Act was amended to establish a Rural Telephone Account and the Rural Telephone Bank (85 Stat. 29; 7 U.S.C. 903; 922; 931; 932; 941 – 950b).
- 1972 On June 30, the Rural Electrification Act was amended to authorize the Secretary of the Treasury to purchase Telephone Bank debentures (86 Stat. 390; 7 U.S.C. 947).
- 1973 On May 11, the Rural Electrification Act was amended to establish a revolving fund for insured and guaranteed loans under Title III (87 Stat. 65; 7 U.S.C. 903; 931 – 940; 945 – 948).
- 1975 On November 4, the Rural Electrification Act was amended to expressly authorize the assignment of REA guarantees to the extent provided in contract of guarantee, to clarify the incontestability of the Government guarantee, and to specifically require justification of budget estimates (89 Stat. 677; 7 U.S.C. 906; 936; and 938).
- 1976 On April 21, the “Fiscal Year Adjustment Act,” amended the Rural Electrification Act to reflect necessary changes in laws because of the October–September fiscal year (90 Stat. 375; 31 U.S.C. 910; 946; 950).
- 1976 On October 20, the Rural Electrification Act was amended to correct unintended inequities in the interest rate criteria and to transfer the unobligated balance of the 1973 loan authorizations to the Rural Electrification and Telephone Revolving Fund (90 Stat. 2701; 7 U.S.C. 931; 935).
- 1977 On August 4, the “Department of Energy Organization Act” added Section 16 to Title I, to require the Administrator, when making or guaranteeing generation or transmission loans, to consider general criteria published by the Secretary of Energy (91 Stat. 608; 7 U.S.C. 916).
- 1981 On August 13, the “Omnibus Reconciliation Act of 1981,” amended the Rural Electrification Act: (1) to establish a 5 percent interest rate, with certain exceptions, for loans from the revolving fund; and (2) to require the Federal Financing Bank to make a loan under an REA guarantee if requested by a borrower with such a guarantee (95 Stat. 379; 7 U.S.C. 935 – 937).
- 1981 On December 22, the “Agriculture and Food Act of 1981,” amended the Rural Electrification Act to extend for another 10 years the authorization for Federal stock purchases in the Rural Telephone Bank (95 Stat. 1347; 7 U.S.C. 946).
- 1986 On October 21, the “Omnibus Budget Reconciliation Act of 1986,” amended the Rural Electrification Act to authorize the prepayment of certain loans made by the Federal Financing Bank and guaranteed by the Rural Electrification Administration. The Act further provides for sale or prepayment of direct or insured loans by the borrower through September 30, 1987. (100 Stat. 1876 ; 7 U.S.C. 936.)
- 1986 On October 30, an act “Making Continuing Appropriations For Fiscal Year 1987, And For Other Purposes,” amended the Rural Electrification Act to establish a privatization demonstration program in the State of Alaska to allow electric and telephone borrowers under the Rural Electrification Act to prepay with private capital all their loans guaranteed or otherwise made by and through the Rural Electrification Administration providing certain conditions are met. (100 Stat. 1876 ; 7 U.S.C. 936.)

Amendments to the RE Act in 1987: 1) extended during fiscal year 1988 the program for the prepayment of certain REA guaranteed Federal Financing Bank loans, including giving priority to eight financially troubled borrowers; 2) authorized borrowers of insured or guaranteed electric loans to invest its own funds or make loans or guarantees, not in excess of 15 percent of its total utility plant, without restriction or prior approval of the Administrator; 3) directed the Administrator to develop and promote a program to encourage borrowers to voluntarily make deposits into cushion of credit accounts established within the Rural Electrification and Telephone Revolving Fund (RETRF), maintain a sub-account within the RETRF to which certain interest credits would be credited for the purpose of making grants or zero interest loans to borrowers for the purpose of promoting rural economic development; 4) authorizes during fiscal year 1988 prepayment of Rural Telephone Bank loans (or any part thereof) by prepaying the face amount thereof without being required to prepay the prepayment penalty; 5) establishes the RTB interest rate formulas; 6) establishes in the Telephone Bank a reserve for losses due to interest rate fluctuations; and 7) requires publication of all rules, regulations, bulletins and other written policy standards governing the operation to the Telephone Bank's programs in accordance with Section 553 of Title 5, United States Code.

(101 Stat. 1330)

## PROGRAM ACCOMPLISHMENTS

### Extending and Improving Service

REA's programs have been very successful in extending electric and telephone service to persons in rural areas. By 1953 more than 90 percent of all farms in the U. S. had electricity; for telephone service, the 90 percent mark was passed in 1976.

Chart C-1: Percent of Farms with Electric and Telephone Service  
U.S. Totals

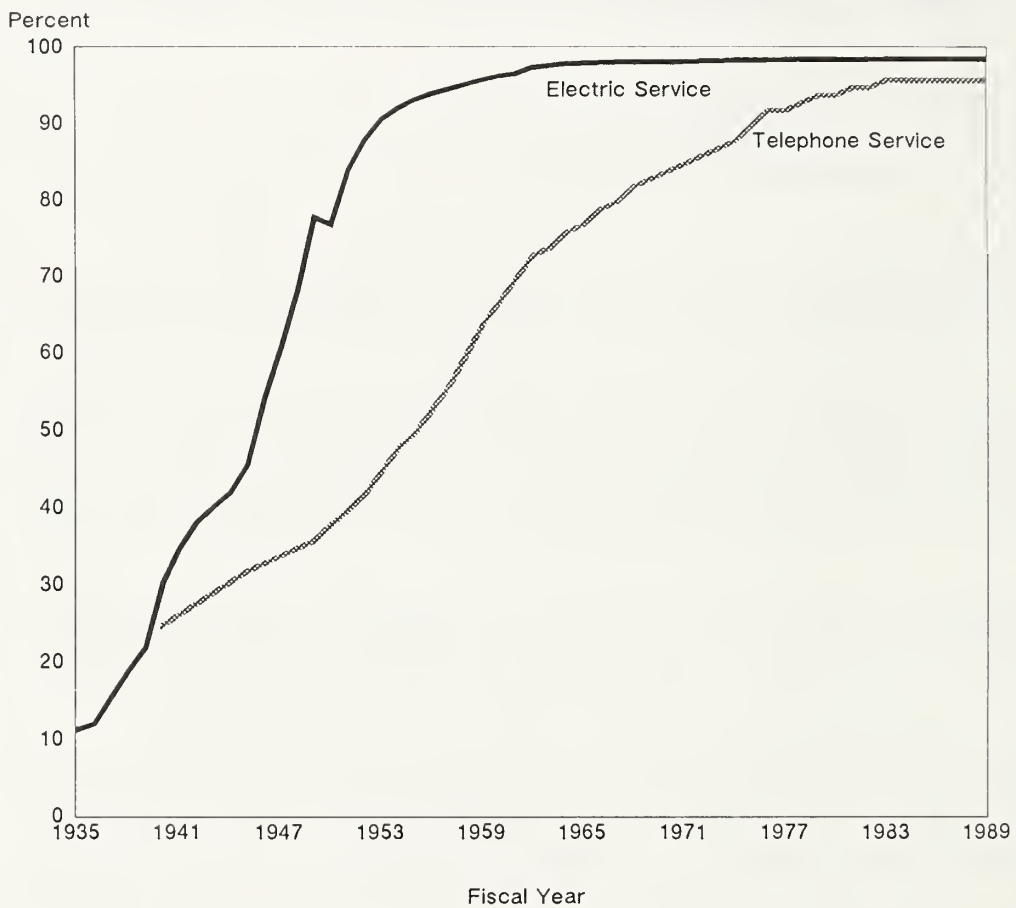


Table C-1: Percent of Farms with Electric and Telephone Service

<u>Fiscal Year</u>	<u>Electricity</u>	<u>Telephone</u>	<u>Fiscal Year</u>	<u>Electricity</u>	<u>Telephone</u>
1935	11.6 %	---	1963	97.9 %	74.0 %
1936	12.3	---	1964	98.1	76.0
1937	15.8	---	1965	98.2	77.0
1938	19.1	---	1966	98.3	79.0
1939	22.1	---	1967	98.4	80.0
1940	30.4	25.0 %	1968	98.4	82.0
1941	34.9	---	1969	98.4	83.0
1942	38.3	---	1970	98.4	84.0
1943	40.3	---	1971	98.4	85.0
1944	42.2	---	1972	98.5	86.0
1945	45.7	32.0	1973	98.5	87.0
1946	54.3	---	1974	98.6	88.0
1947	61.0	34.0	1975	98.6	90.0
1948	68.6	35.0	1976	98.6	92.0
1949	78.2	36.0	1977	98.7	92.0
1950	77.2	38.0	1978	98.7	93.0
1951	84.2	40.0	1979	98.7	94.0
1952	88.1	42.0	1980	98.7	94.0
1953	90.8	45.0	1981	98.7	95.0
1954	92.3	48.0	1982	98.7	95.0
1955	93.4	50.0	1983	98.8	96.0
1956	94.2	53.0	1984	98.8	96.0
1957	94.8	56.0	1985	98.8	96.0
1958	95.4	60.0	1986	98.8	96.0
1959	96.0	64.0	1987	98.8	96.0
1960	96.5	67.0	1988	98.8	96.0
1961	96.8	70.0	1989	98.8	96.0
1962	97.6	73.0			



In addition to financing the extensions of electric and telephone service to rural areas, REA has provided credit to rural telephone utilities for system improvements that have dramatically upgraded the quality of telephone service in rural America.

Before the REA Telephone Program, rural telephone service was often antiquated and unreliable—even where it was available.

Today modern and reliable telephone service is available for people who live, work, or do business in rural areas. The availability of modern communications systems has improved the quality of life of rural people and has strengthened their local economies. Improvement continues as more rural residents receive single party service.

Chart C-2: Grades of Service Provided to Subscribers Served by REA Telephone Borrowers

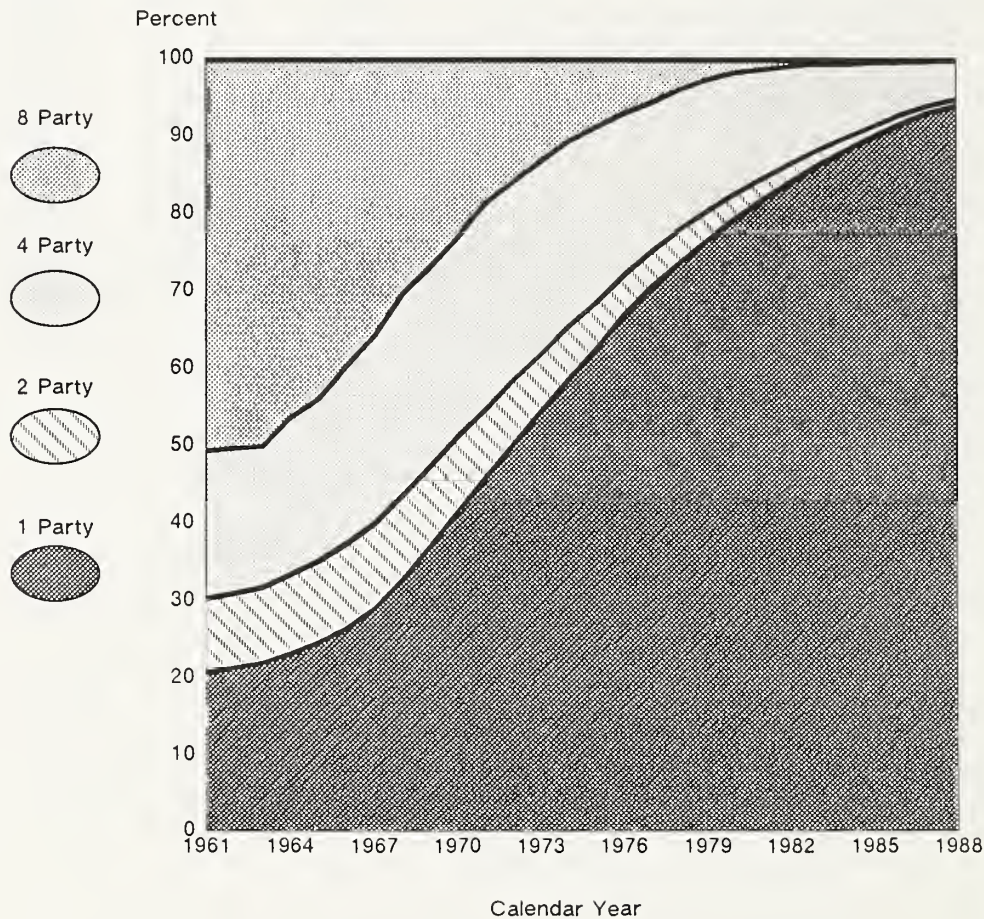


Table C-2: Number of Subscribers Served by REA Telephone Borrowers,  
by Grade of Service\*

(Subscribers in Thousands)

Year	One Party		Two Party		Four Party**		Eight Party***	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1961	269.6	20.9	124.3	9.6	246.9	19.1	650.7	50.4
1962	306.2	21.6	136.8	9.6	266.1	18.7	710.8	50.1
1963	338.2	22.2	147.6	9.7	278.4	18.3	759.2	49.8
1964	381.2	23.4	165.0	10.2	330.4	20.3	750.0	46.1
1965	428.7	24.8	182.0	10.5	362.7	21.0	752.9	43.7
1966	486.5	26.6	199.2	10.9	418.6	22.9	721.5	39.6
1967	567.1	29.2	211.8	10.9	472.4	24.3	693.0	35.6
1968	680.0	32.9	223.8	10.8	537.8	26.0	625.4	30.3
1969	810.7	37.1	227.5	10.4	560.1	25.7	586.3	26.8
1970	972.3	41.6	227.4	9.8	598.7	25.6	536.1	23.0
1971	1,117.2	46.0	217.0	8.9	642.5	26.5	452.2	18.6
1972	1,298.0	50.4	212.5	8.3	655.1	25.4	409.2	15.9
1973	1,489.9	54.7	200.4	7.3	675.2	24.8	359.5	13.2
1974	1,717.0	58.8	196.9	6.8	695.8	23.8	309.4	10.6
1975	1,909.2	62.7	183.3	6.0	685.2	22.5	267.6	8.8
1976	2,205.2	67.1	166.8	5.1	682.0	20.8	229.2	7.0
1977	2,545.6	70.7	165.2	4.6	688.7	19.1	199.6	5.6
1978	2,861.4	73.8	162.3	4.2	700.2	18.1	153.1	3.9
1979	3,122.8	76.7	153.0	3.7	691.1	17.0	104.8	2.6
1980	3,383.1	79.4	136.1	3.2	669.7	15.7	72.4	1.7
1981	3,582.6	81.9	120.9	2.7	615.6	14.1	54.9	1.3
1982	3,826.7	84.2	103.0	2.3	574.1	12.6	41.8	0.9
1983	3,998.5	86.4	86.9	1.9	519.0	11.2	24.3	0.5
1984	4,193.2	88.3	74.7	1.6	451.0	9.5	28.0	0.6
1985	4,318.2	90.1	62.1	1.3	392.7	8.2	19.2	0.4
1986	4,437.5	91.8	53.5	1.1	328.4	6.8	13.3	0.3
1987	4,663.7	93.2	45.2	0.9	287.7	5.7	7.9	0.2
1988	4,797.1	94.1	39.0	0.8	254.0	5.0	6.8	0.1

\* To provide a more accurate representation, data for borrowers with total REA and RTB loans and REA loan guarantee commitments of less than 20 percent of their total assets have been excluded beginning in 1971.

\*\* Before 1984, Five Party was included with Four Party.

\*\*\* Includes service stations (switchers) which represent less than 1 percent of the total number of subscribers. Also includes any line with more than Four Party Service, beginning in 1984.

### Meeting the Growing Demand for Service

Rural electric and telephone systems have been able to meet an ever increasing demand for service. Each year the number of households served by REA electric and telephone borrowers has increased. In the early years this growth was mainly due to service being extended to households that had never before had electricity or telephones. More recently the growth is primarily because of the rapid population increases that have occurred in rural America--particularly in "sunbelt" and western states.

**Chart C-3: Number of Consumers & Subscribers Served  
By REA Electric & Telephone Borrowers**

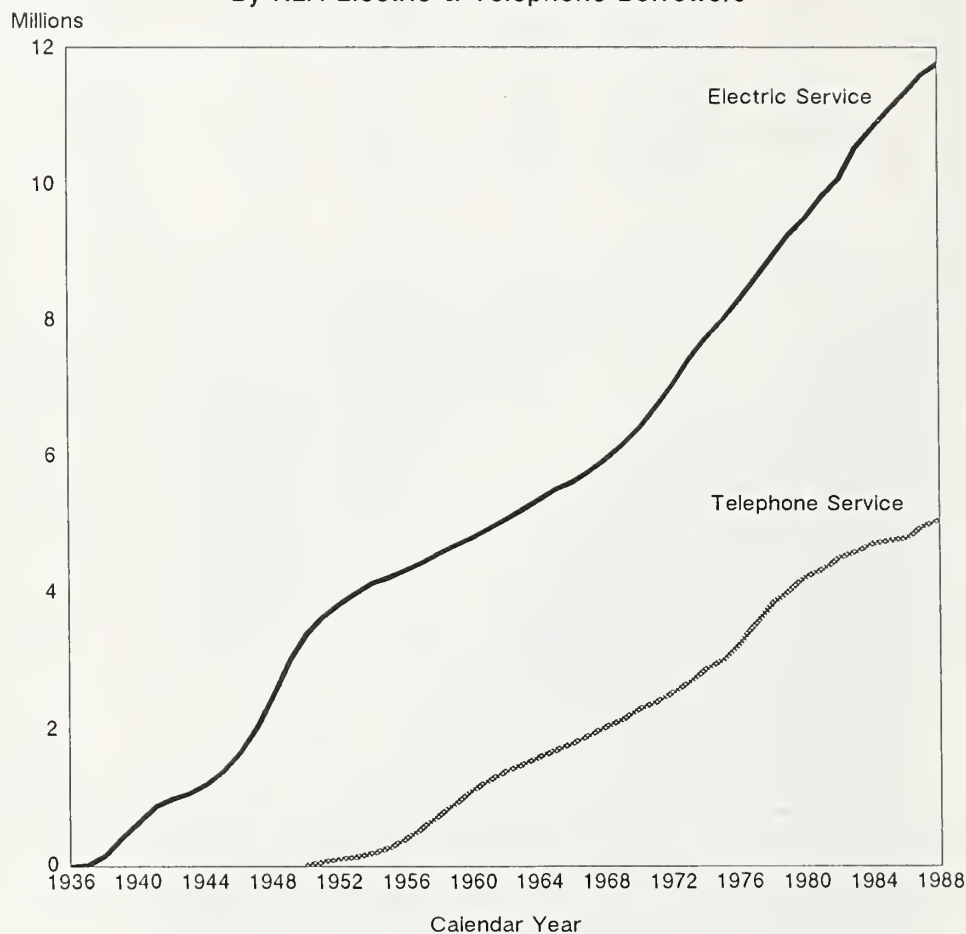


Table C-3: Number of Consumers and Subscribers Served by  
REA Electric and Telephone Borrowers  
(in Thousands)

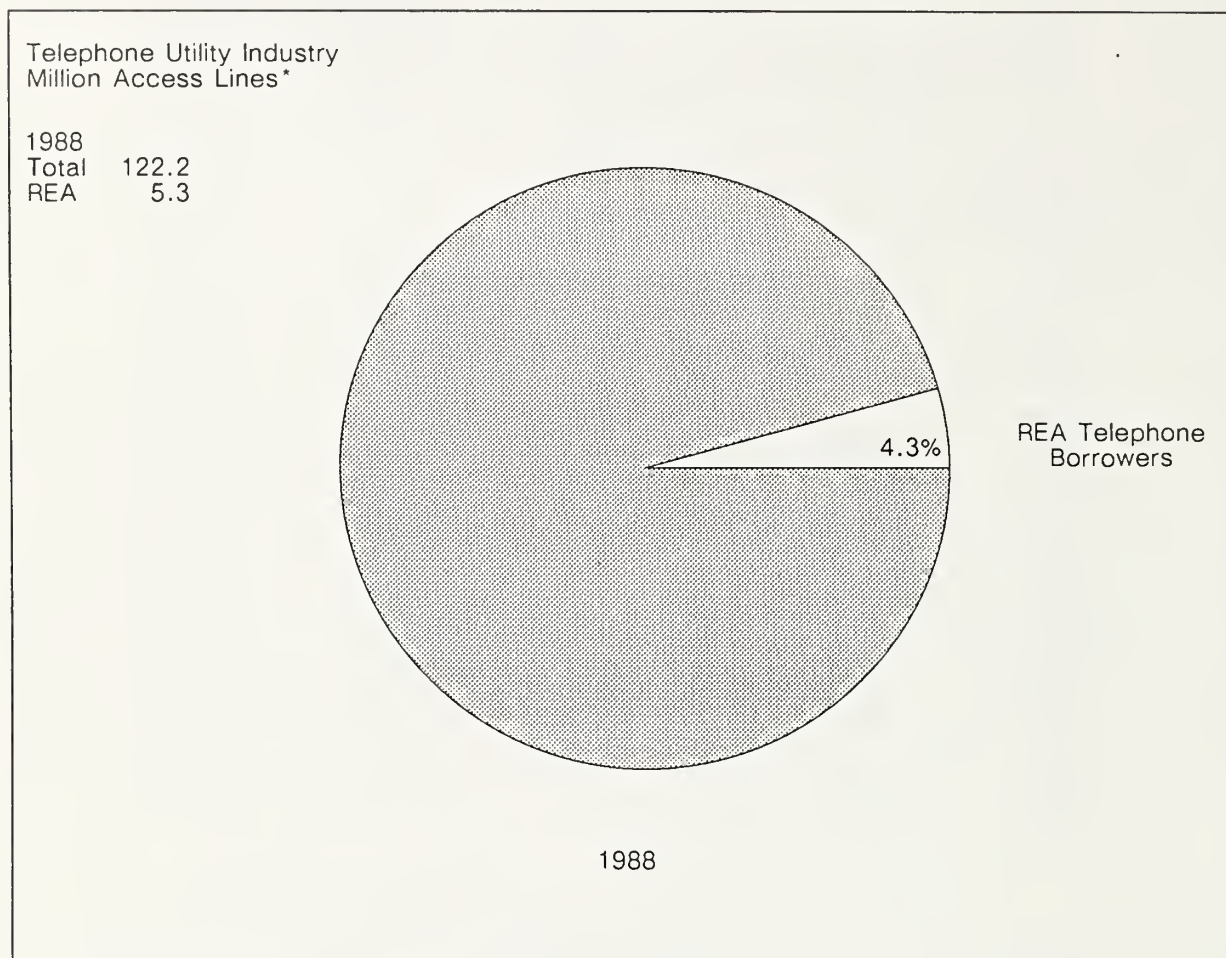
Calendar Year	Electric Consumers	Telephone Subscribers	Calendar Year	Electric Consumers	Telephone Subscribers
1936	7.5		1963	5,237.9	1,523.4
1937	43.9		1964	5,386.1	1,626.6
1938	176.4		1965	5,541.5	1,726.4
1939	435.6		1966	5,652.8	1,825.9
1940	674.5		1967	5,806.0	1,944.3
1941	902.3		1968	5,986.1	2,067.0
1942	1,012.3		1969	6,197.0	2,184.6
1943	1,087.8		1970	6,442.3	2,334.5
1944	1,216.8		1971	6,747.7	2,428.9
1945	1,408.9		1972	7,076.2	2,574.8
1946	1,683.9		1973	7,457.1	2,725.0
1947	2,046.1		1974	7,767.8	2,919.1
1948	2,518.5		1975	8,017.7	3,045.3
1949	3,040.4		1976	8,311.8	3,283.2
1950	3,413.4	29.1	1977	8,630.8	3,599.1
1951	3,666.0	86.9	1978	8,962.5	3,877.1
1952	3,858.4	131.4	1979	9,275.1	4,072.7
1953	4,024.8	157.4	1980	9,523.6	4,262.4
1954	4,174.4	215.8	1981	9,844.3	4,374.9
1955	4,251.3	296.2	1982	10,096.5	4,545.6
1956	4,361.9	432.0	1983	10,555.4	4,628.8
1957	4,466.4	604.7	1984	10,836.4	4,746.9
1958	4,596.3	778.5	1985	11,110.2	4,792.1
1959	4,721.6	958.9	1986	11,357.1	4,832.7
1960	4,825.8	1,142.0	1987	11,628.1	5,004.6
1961	4,955.6	1,291.5	1988	11,798.0	5,096.9
1962	5,095.0	1,419.9			

Note: The number of consumers and subscribers served is approximately equal to the number of households and business establishments served.



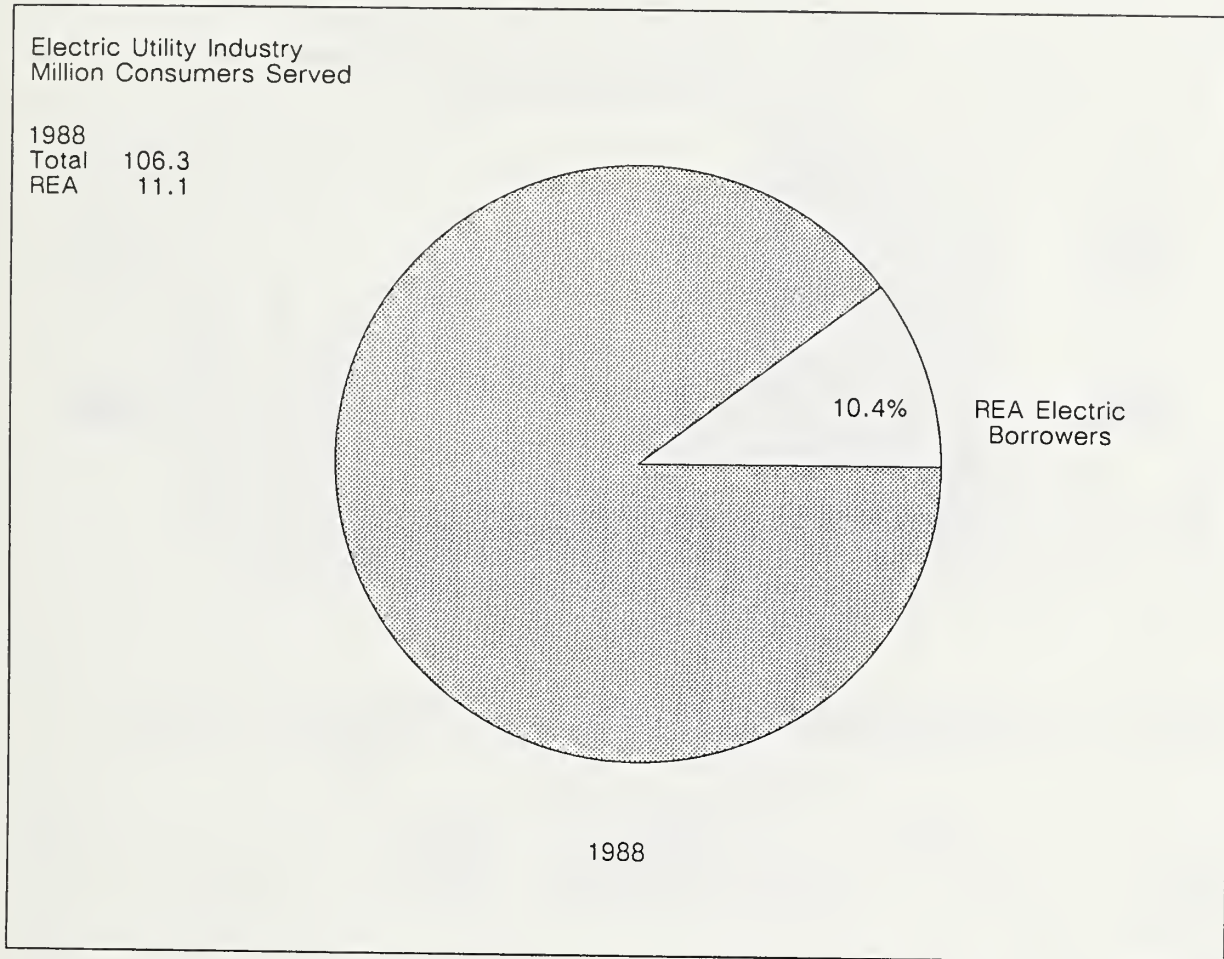
Today the rural electric and telephone utilities that receive financing from REA have developed into strong business organizations. Although not large when compared with many urban utilities, they are vital components of their respective industries.

Chart C-4: Percent of Telephone Subscribers  
Served by REA Borrowers



\* An access line is any line (or loop) terminating at the telephone company central office. In prior years, estimates were based on subscribers served, however, while REA borrowers still report subscriber data, the rest of the telephone industry does not.

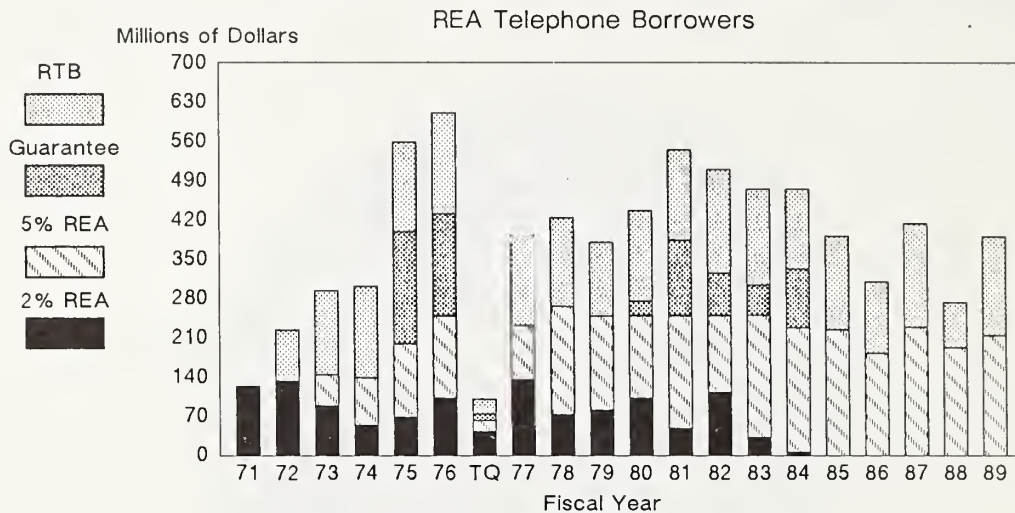
Chart C-5: Percent of Electric Consumers  
Served by REA Borrowers



## LOAN STATISTICS

REA telephone borrowers have received a greater amount of their financing needs from REA loans than from other sources. These REA loans are supplemented by loans from the Rural Telephone Bank and REA guarantees of loans from other sources--mainly the Federal Financing Bank.

**Chart D-1: Sources of Long-Term Financing\***



**Table D-1: Long-Term Financing Approved by Fiscal Year - REA Telephone Borrower\***  
(in Millions)

Fiscal Year	REA		Non-REA		Total
	2%	5%	REA Guarantee Commitments	Rural Telephone Bank	
1971	\$125.0	---	---	---	\$125.0
1972	133.7	---	---	\$ 91.0	224.7
1973	90.0	\$ 55.0	---	150.0	295.0
1974	55.2	84.8	---	163.0	303.0
1975	70.0	129.9	\$200.0	160.2	560.1
1976	103.8	146.3	181.6	180.1	612.8
TQ	43.1	19.4	12.3	26.5	101.2
1977	136.5	96.7	0.0	160.3	393.6
1978	74.7	191.9	0.0	159.2	425.8
1979	81.6	168.3	0.0	130.8	380.7
1980	103.2	146.9	27.4	160.0	437.5
1981	49.7	200.1	136.4	159.9	546.1
1982	113.3	136.0	77.0	184.8	511.1
1983	33.1	217.6	54.0	171.6	476.3
1984	5.8	222.8	105.1	143.0	476.7
1985	0.0	224.6	0.0	167.8	392.4
1986	0.0	183.3	0.0	127.9	311.2
1987	0.0	229.8	0.0	185.1	414.9
1988	0.0	193.4	0.0	80.1	273.6
1989	0.0	214.1	0.0	177.0	391.1

\* Does not include Lien Accommodations and Non-Loan Funds.

Until the 1973 amendment to the Rural Electrification Act, virtually all financing to REA electric borrowers was supplied by direct REA loans at an interest rate of 2 percent. Beginning in 1973 the amount of financing received by rural electric systems increased greatly and most of this financing has been approved by non-REA sources, primarily the Federal Financing Bank (FFB), with an REA guarantee, at FFB's market rate of interest. During fiscal year 1989, less than one-half of electric borrowers' financing needs were supplied by non-government sources.

Chart D-2: Sources of Long-Term Financing REA Electric Borrowers

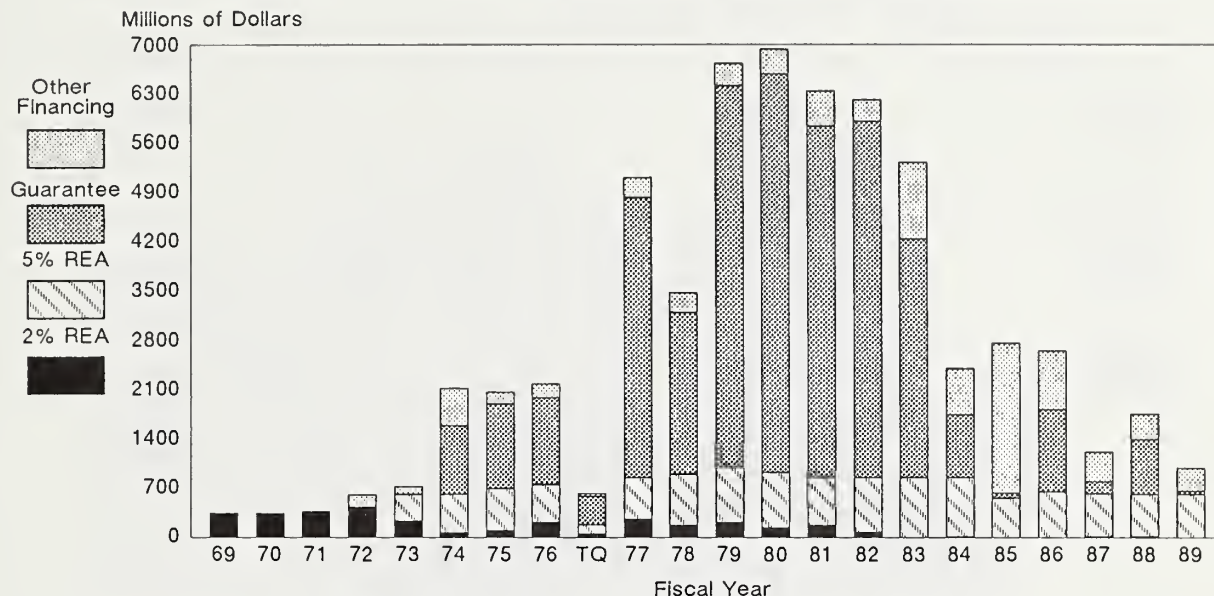


Table D-2: Long-Term Financing Approved by Fiscal Year - REA Electric Borrowers  
(in Millions)

Fiscal Year	REA		Non-REA		Total
	2%	5%	REA Guarantee Commitments	Other Financing	
1969	\$344.8	-----	-----	-----	\$ 344.8
1970	345.0	-----	-----	-----	345.0
1971	361.8	-----	-----	\$ 12.8	374.6
1972	438.3	-----	-----	168.4	606.7
1973	235.1	\$382.8	-----	107.6	725.5
1974	65.5	553.1	\$ 974.4	533.9	2,126.9
1975	105.0	595.0	1,206.3	165.0	2,071.3
1976	222.5	527.5	1,241.5	198.4	2,189.9
TQ	47.2	140.3	403.9	31.9	623.3
1977	268.2	581.8	3,985.5	278.3	5,113.8
1978	176.2	723.8	2,309.1	276.3	3,485.4
1979	222.9	777.1	5,429.7	311.9	6,741.6
1980	142.5	782.5	5,660.1	368.3	6,953.4
1981	178.3	671.7	4,994.9	503.9	6,348.8
1982*	77.8	772.2	5,064.6	304.7	6,219.3
1983*	2.7	847.3	3,388.3	1,096.5	5,334.8
1984*	12.6	837.4	897.2	656.5	2,403.7
1985	2.0	560.0	74.6	2,135.6	2,772.2
1986	0.0	651.9	1,167.5	841.0	2,660.4
1987	12.5	615.9	174.7	410.1	1,213.2
1988	10.1	612.0	774.7	360.1	1,756.8
1989	1.3	620.8	39.5	324.9	986.4

\* Does not include funds made available through the provisions of the Economic Recovery Tax Acts (\$629.2 million in F.Y. 1982, \$526.4 million in F.Y. 1983 and \$46.1 million in F.Y. 1984).



REA electric distribution borrowers receive most of their financing from REA at a 5 percent interest rate. The remainder is obtained from REA at interest rates as low as 2 percent (a very small amount since the 1981 amendment to the RE Act) and from non-REA sources such as the National Rural Utilities Cooperative Finance Corporation (CFC) and the Bank for Cooperatives.

Chart D-3: Sources of Long-Term Financing REA Distribution Borrowers

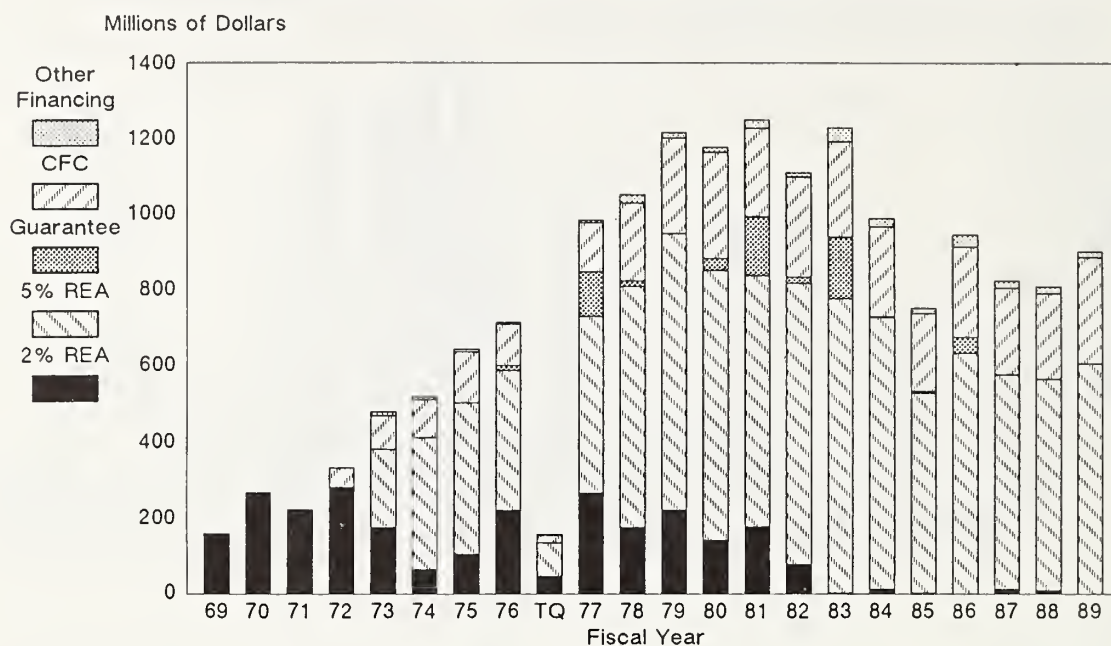


Table D-3: Long-Term Financing Approved by Fiscal Year  
REA Electric Distribution Borrowers  
(in Millions)

Fiscal Year	REA			Non-REA		Total
	2%	5%	REA Guarantee Commitments	CFC	Other Financing	
1969	\$ 162.0	-----	-----	-----	-----	\$ 162.0
1970	269.7	-----	-----	-----	-----	269.7
1971	222.0	-----	-----	\$ 1.8	-----	223.8
1972	282.6	-----	-----	50.7	\$ 0.6	333.9
1973	176.8	\$ 206.0	-----	88.3	8.9	480.0
1974	65.5	347.6	-----	99.9	7.1	520.1
1975	105.0	398.5	-----	134.7	6.6	644.8
1976	222.5	365.9	\$ 13.4	108.1	6.1	716.0
TQ	47.2	88.3	0.0	20.4	1.6	157.5
1977	268.2	462.1	117.8	129.9	6.6	984.6
1978	176.2	633.8	15.7	204.5	22.1	1,052.3
1979	222.9	727.5	0.0	254.6	13.3	1,218.3
1980	142.4	709.8	32.5	280.8	14.9	1,180.4
1981	178.3	660.5	156.3	234.5	23.3	1,252.9
1982	77.8	740.1	16.4	265.6	11.9	1,111.8
1983	2.7	774.7	164.3	252.6	37.4	1,231.7
1984	12.6	716.9	1.1	237.8	22.4	990.8
1985	2.0	526.9	5.0	205.4	13.8	753.1
1986	0.0	634.7	42.0	237.2	32.9	946.8
1987	12.5	565.1	0.0	229.1	17.5	824.2
1988	10.1	556.1	0.0	224.4	19.6	810.2
1989	1.3	606.5	0.0	279.5	14.8	902.1

REA electric power supply borrowers receive most of the financing approved by REA; almost all of this is provided by non-REA sources, mainly the Federal Financing Bank, with an REA loan guarantee. Since the 1973 amendment to the Rural Electrification Act, which gave REA the authority to guarantee loans made by other lenders, REA's program of financing for power supply projects has grown from a modest one to one of large magnitude.

Chart D-4: Sources of Long-Term Financing  
REA Power Supply Borrowers

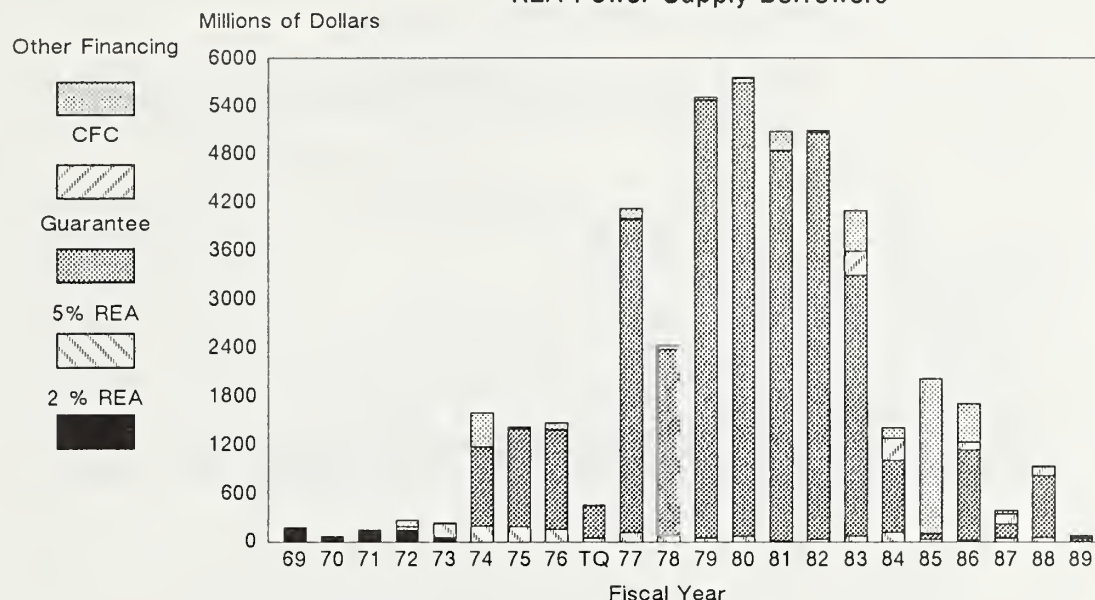


Table D-4: Long-Term Financing Approved by Fiscal Year  
REA Electric Power Supply Borrowers  
(in Millions)

Fiscal Year	REA		REA Guarantee	Non-REA		Other	Total
	2%	5%	Commitments	CFC	Financing		
1969	\$182.8	-----	-----	-----	-----		\$ 182.8
1970	75.2	-----	-----	-----	-----		75.2
1971	139.8	-----	-----	\$ 11.0	-----		150.8
1972	155.6	-----	-----	42.1	\$ 75.0		272.7
1973	58.3	\$176.8	-----	10.1	0.0		245.2
1974	0.0	205.5	\$ 974.4	4.9	422.0		1,606.8
1975	0.0	196.5	1,206.3	23.7	0.0		1,426.5
1976	0.0	161.6	1,228.1	8.1	76.1		1,473.9
TQ	0.0	52.0	403.9	0.0	9.9		465.8
1977	0.0	119.7	3,867.7	20.4	121.4		4,129.2
1978	0.0	90.0	2,293.4	5.5	44.2		2,433.1
1979	0.0	49.6	5,429.7	8.4	35.6		5,523.3
1980	0.0	72.7	5,627.6	61.1	11.2		5,772.9
1981	0.0	11.2	4,838.7	13.2	232.9		5,096.0
1982*	0.0	32.1	5,048.2	22.7	4.5		5,107.5
1983*	0.0	72.6	3,224.0	298.8	507.7		4,103.1
1984*	0.0	120.4	896.1	272.5	123.8		1,412.9
1985	0.0	33.1	69.6	13.6	1,902.8		2,019.1
1986	0.0	17.2	1,125.6	93.7	477.2		1,713.7
1987	0.0	50.8	174.7	127.9	35.6		389.0
1988	0.0	55.8	774.7	108.1	8.0		946.6
1989	0.0	14.2	39.5	22.5	8.1		84.3

\* Does not include funds made available through the provisions of Economic Recovery Tax Acts (\$629.2 million in F.Y. 1982, \$526.4 million in F.Y. 1983 and \$46.1 million in F.Y. 1984)

The number of REA electric borrowers has not changed much since about 1950. The small increases that have occurred during the last several years have been mainly because of the formation of new power supply systems that are wholly owned by REA electric distribution borrowers. The number of REA telephone borrowers increased rapidly during the first 10-15 years of the program. The number of telephone borrowers continues to increase each year mainly because of initial loans to existing telephone utilities to extend and upgrade telephone service to rural subscribers.

Chart D-5: Number of REA Borrowers

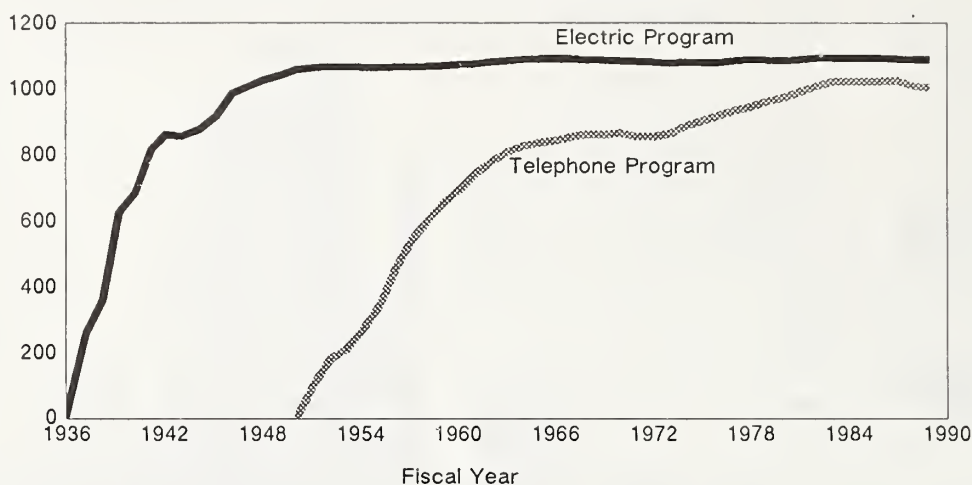


Table D-5: Number of REA Electric and Telephone Borrowers  
Fiscal Years 1936-1986

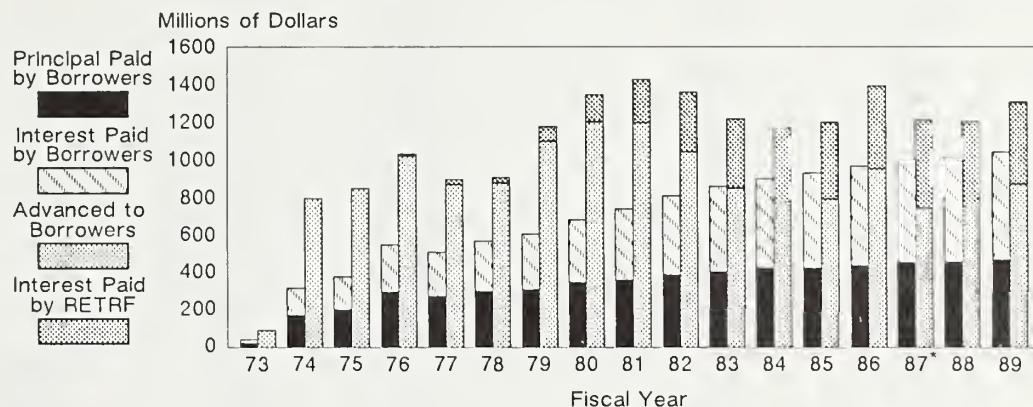
Fiscal Year	Electric Borrowers	Telephone Borrowers	Fiscal Year	Electric Borrowers	Telephone Borrowers
1936	66	---	1964	1,102	838
1937	266	---	1965	1,104	848
1938	367	---	1966	1,103	855
1939	632	---	1967	1,103	867
1940	692	---	1968	1,100	874
1941	823	---	1969	1,099	873
1942	874	---	1970	1,097	878
1943	869	---	1971	1,095	867
1944	887	---	1972	1,094	867
1945	926	---	1973	1,091	876
1946	996	---	1974	1,094	900
1947	1,019	---	1975	1,093	915
1948	1,039	---	1976	1,093	930
1949	1,053	---	TQ	1,093	930
1950	1,070	17	1977	1,097	946
1951	1,076	113	1978	1,101	957
1952	1,080	190	1979	1,099	974
1953	1,079	219	1980	1,097	985
1954	1,079	279	1981	1,102	1,004
1955	1,077	351	1982	1,105	1,021
1956	1,078	466	1983	1,106	1,034
1957	1,078	551	1984	1,105	1,036
1958	1,080	611	1985	1,106	1,034
1959	1,083	665	1986	1,105	1,035
1960	1,087	705	1987	1,103	1,037
1961	1,089	753	1988	1,102	1,021
1962	1,094	790	1989	1,101	1,017
1963	1,098	820			

Each year since the Rural Electrification and Telephone Revolving Fund (RETRF) was established in 1973, REA has paid out more in advances to borrowers and in interest, than it has received in payments on loans.

In 1987 loan payments totaling \$428 million were received as a result of the direct loan prepayment program established by Congress in the Omnibus Budget Reconciliation Act of 1986.

The RETRF obtains the additional funds necessary to meet advances and interest expenses from the U.S. Treasury, directly or through the Federal Financing Bank, at rates of interest greatly in excess of the interest rates charged borrowers.

**Chart D-6: Rural Electrification and Telephone Revolving Fund**



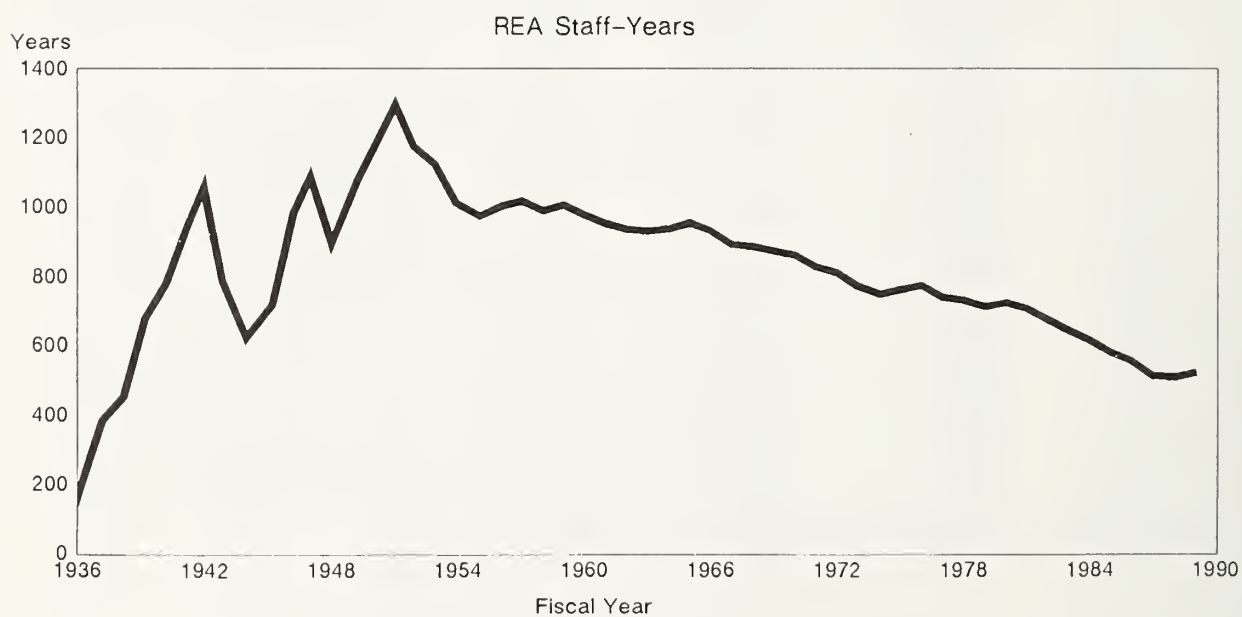
**Table D-6: The Rural Electrification and Telephone Revolving Fund (RETRF)**  
(Dollars in Millions)

Fiscal Year	Loan Payments Received		RETRF Outlays	
	Principal	Interest	Advances	Interest Paid
1973	\$ 20.3	\$ 21.4	\$ 92.4	\$ 0.0
1974	173.1	144.2	802.4	0.0
1975	204.0	174.3	854.9	0.0
1976	299.2	252.3	1,027.9	11.4
1977	275.2	234.9	874.9	29.6
1978	303.1	268.1	881.4	33.3
1979	313.8	296.9	1,105.2	79.1
1980	349.1	336.9	1,206.8	144.1
1981	363.1	382.7	1,203.8	228.4
1982	389.3	425.8	1,048.0	316.5
1983	405.2	459.1	855.6	367.9
1984	425.5	479.2	780.0	395.6
1985	428.3	509.8	797.1	408.9
1986	439.1	536.0	960.9	438.0
1987 *	457.2	553.9	752.1	464.1
1988	461.2	560.5	757.3	453.3
1989	469.7	577.3	880.2	434.1

\*Excludes notes paid in full under the direct loan prepayment program.

Although the total amount of financing provided or guaranteed by REA has increased over the years, as has the complexity of many of the electric generation and telephone projects, REA's staff has effectively handled the increased work load.

Chart D-7: Loans, Guarantees, and Staff-Years



\*Includes REA electric and telephone loans, RTB loans and REA loan guarantee commitments.



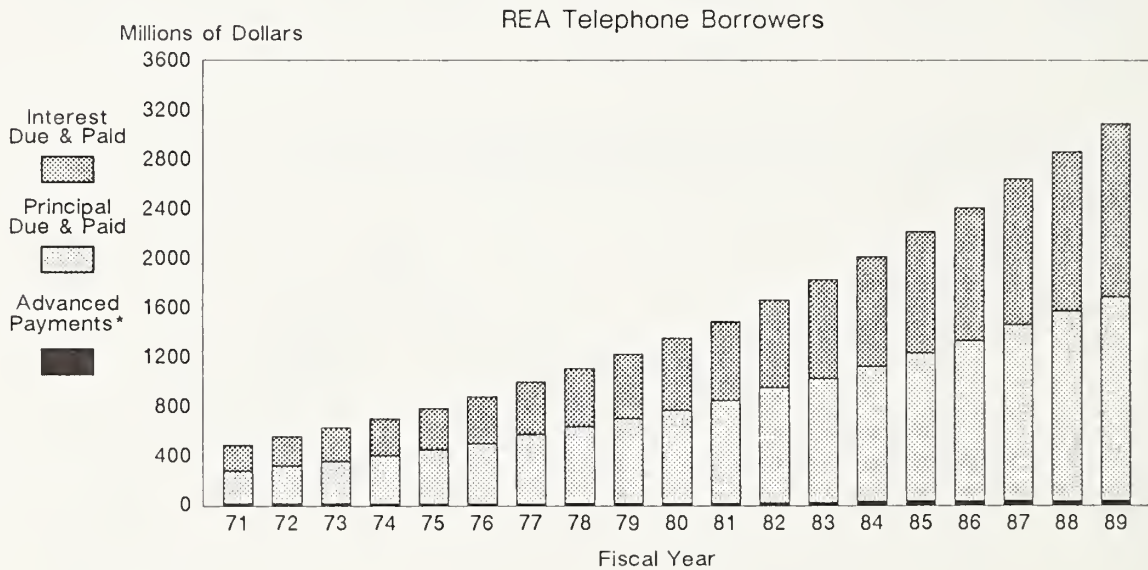
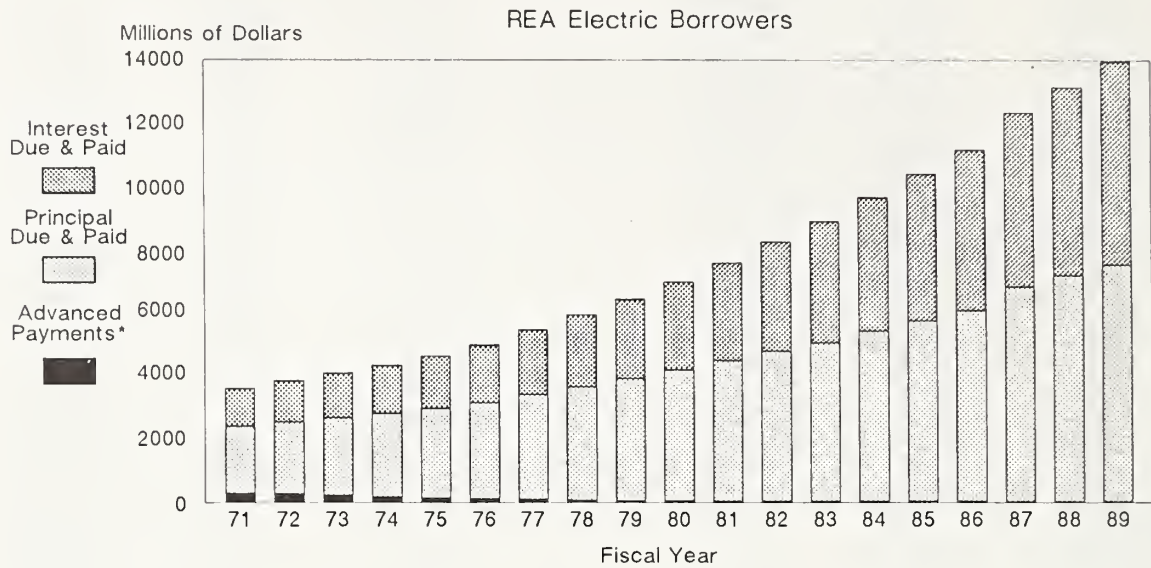
**Table D-7: Staff – Years vs. Loan Funds Approved,  
Fiscal Years 1936–1989**

Fiscal Year	Staff Years	Loan Funds Approved* (in Thousands)	Fiscal Year	Staff Years	Loan Funds Approved* (in Thousands)
1936	206	\$ 17,929	1964	950	\$ 351,412
1937	391	50,347	1965	966	476,947
1938	460	31,660	1966	943	412,729
1939	684	141,899	1967	904	470,984
1940	785	44,880	1968	898	469,928
1941	950	101,710	1969	884	469,825
1942	1,094	91,282	1970	872	469,962
1943	790	8,225	1971	839	486,817
1944	646	34,002	1972	821	662,873
1945	723	26,343	1973	782	912,931
1946	987	290,914	1974	760	1,896,075
1947	1,117	256,389	1975	773	2,466,470
1948	929	319,110	1976	785	2,603,287
1949	1,076	449,318	TQ	168	692,585
1950	1,201	379,719	1977	751	5,229,061
1951	1,321	259,993	1978	741	3,634,935
1952	1,183	209,017	1979	724	6,810,338
1953	1,131	206,946	1980	735	7,022,604
1954	1,020	241,816	1981	718	6,391,064
1955	987	220,274	1982	686	6,425,693
1956	1,014	270,785	1983	655	4,714,614
1957	1,029	382,191	1984	626	2,223,891
1958	1,002	330,875	1985	591	1,028,998
1959	1,018	276,215	1986	566	2,130,682
1960	989	325,108	1987	524	1,628,074
1961	964	416,902	1988	520	1,670,272
1962	948	352,931	1989	533	1,052,746
1963	943	427,279			

\*Includes REA electric and telephone loans, RTB loans and REA loan guarantee commitments.

As of September 30, 1989, REA has collected more than \$17.1 billion in principal and interest payments from its rural electric and telephone borrowers. Total losses to date have amounted to only \$44,478.

Chart D-8: Cumulative Payments of Principal and Interest on REA Loans



\* Principal payments made ahead of schedule.

**Table D-8: Payments of Principal and Interest on REA Loans**  
**Cumulative Totals in Millions**  
(Includes Notes Paid in Full)

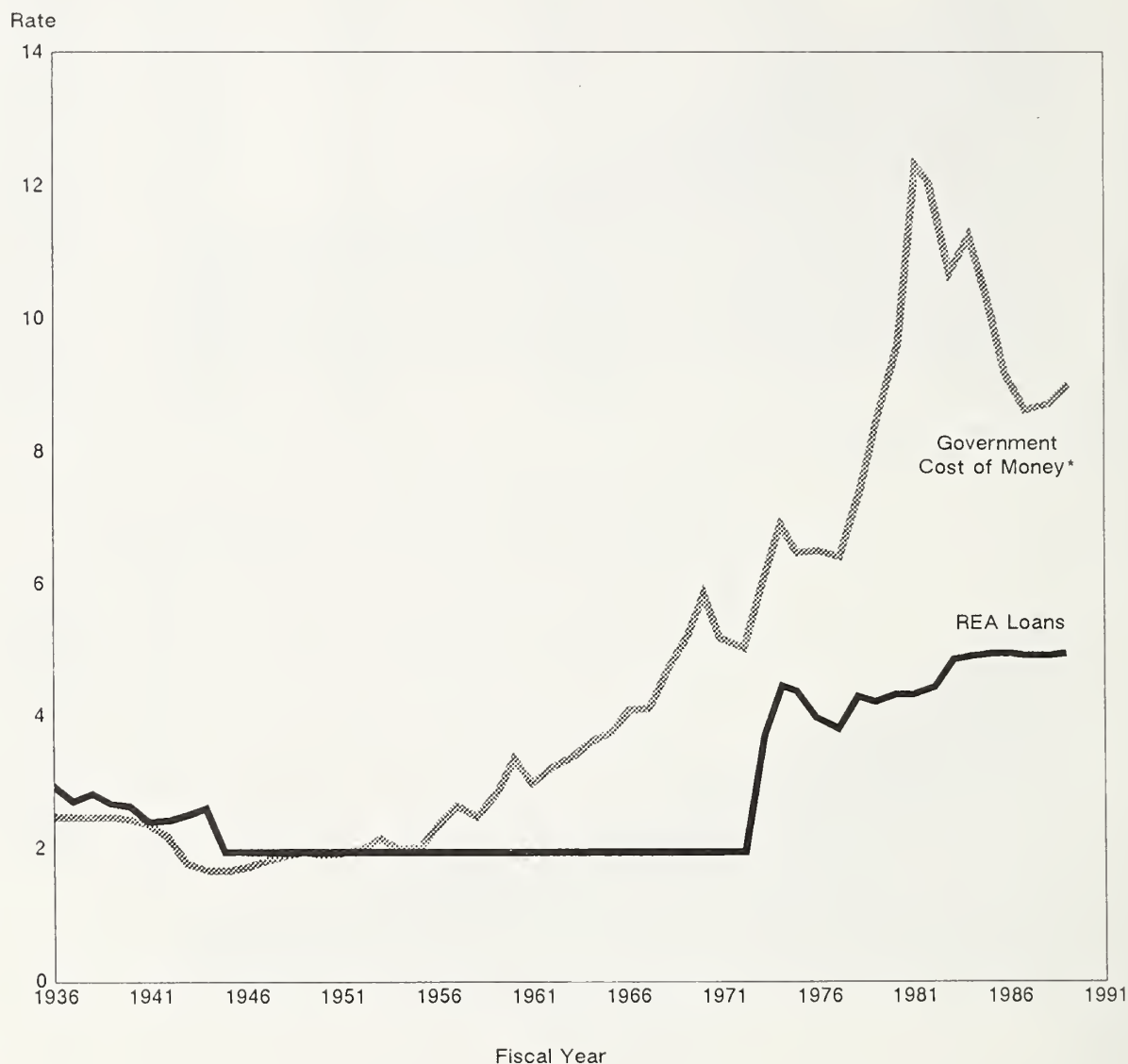
Fiscal Year	Electric			Telephone		
	Advance Payments*	Principal Due & Paid	Interest Due & Paid	Advance Payments*	Principal Due & Paid	Interest Due & Paid
1971	\$ 317.1	\$ 2,097.2	\$ 1,205.0	\$ 25.2	\$ 262.3	\$ 214.1
1972	293.5	2,267.4	1,302.8	25.2	302.2	242.1
1973	244.2	2,446.6	1,406.6	23.9	343.9	271.7
1974	192.5	2,628.6	1,519.6	20.6	389.8	302.9
1975	148.2	2,827.4	1,659.4	20.0	440.1	337.5
1976	125.6	3,038.3	1,822.5	19.4	492.8	374.9
1977	104.7	3,323.1	2,056.3	19.7	563.3	427.4
1978	93.8	3,574.1	2,277.1	21.4	624.6	473.7
1979	74.1	3,842.4	2,523.0	21.6	689.5	523.2
1980	67.0	4,127.5	2,801.7	21.3	760.4	578.5
1981	55.9	4,425.9	3,118.6	22.4	834.4	640.9
1982	48.5	4,736.0	3,469.9	27.0	935.5	710.6
1983	47.6	5,007.5	3,845.0	30.3	1,004.1	805.6
1984	50.7	5,376.8	4,240.4	37.1	1,097.8	892.2
1985	55.5	5,704.8	4,658.4	44.1	1,198.1	983.9
1986	47.8	6,040.7	5,098.2	40.4	1,301.4	1,080.2
1987	35.9	6,793.2	5,552.9	42.4	1,430.3	1,183.2
1988	35.3	7,146.9	6,006.4	40.6	1,540.2	1,290.3
1989	29.0	7,504.6	6,471.9	44.0	1,655.5	1,402.1

\* Principal payments made ahead of schedule.



When Congress created the REA loan program it did not provide an interest rate subsidy. Interest rates charged borrowers fluctuated with the cost of money to the Government. It was not until 1944 that Congress established a fixed interest rate of 2 percent, which at that time was the approximate cost of money to the Government. As time went by and the interest rates rose, the subsidy associated with REA loans grew. During the late 70's and early 80's there has been a significant widening of the gap between the cost of money to the Government and the interest rate charged borrowers on REA loans. Although the gap has narrowed since 1981, the cost of money to the Government remains significantly higher than the REA rate.

Chart D-9: Interest Rate on REA Loans vs. Cost of Money to the Government



\* Computed Annual Interest Rate on Marketable Treasury Issues

Table D-9: Interest Rate on REA Loans vs. Cost of Money to the Government

Fiscal Year	REA Loans*	Government Cost of Money**	Fiscal Year	REA Loans*	Government Cost of Money**
1936	3.00	2.530	1964	2.00	3.659
1937	2.77	2.525	1965	2.00	3.800
1938	2.88	2.521	1966	2.00	4.134
1939	2.73	2.525	1967	2.00	4.165
1940	2.69	2.492	1968	2.00	4.757
1941	2.46	2.413	1969	2.00	5.232
1942	2.48	2.225	1970	2.00	5.986
1943	2.57	1.822	1971	2.00	5.210
1944	2.67	1.725	1972	2.00	5.099
1945	2.00	1.718	1973	3.72	6.129
1946	2.00	1.773	1974	4.52	7.030
1947	2.00	1.871	1975	4.42	6.533
1948	2.00	1.942	1976	4.02	6.559
1949	2.00	2.001	TQ	3.92	6.591
1950	2.00	1.958	1977	3.88	6.481
1951	2.00	1.981	1978	4.35	7.388
1952	2.00	2.051	1979	4.27	8.592
1953	2.00	2.207	1980	4.37	9.608
1954	2.00	2.043	1981	4.38	12.435
1955	2.00	2.079	1982	4.48	12.082
1956	2.00	2.427	1983	4.90	10.850
1957	2.00	2.707	1984	4.95	11.383
1958	2.00	2.546	1985	4.99	10.383
1959	2.00	2.891	1986	5.00	9.193
1960	2.00	3.449	1987	4.96	8.695
1961	2.00	3.063	1988	4.96	8.770
1962	2.00	3.285	1989	5.00	9.043
1963	2.00	3.425			

\* Weighted average interest rate Paid by Borrowers on REA loans approved during the fiscal year.

\*\* Computed Annual Interest Rate on Marketable Treasury Issues.

Source: Monthly Statement of Public Debt, U.S. Department of Treasury.

As of September 1989, REA borrowers had received more than \$61 billion from REA loans, loan guarantee commitments, and RTB loans. Loan guarantee commitments account for most of this financing, however, a large proportion has been provided by REA loans at the 2 percent and 5 percent interest rates.

Chart D-10: Cumulative REA and RTB Loans and REA Guarantee Commitments  
as of September 30, 1989

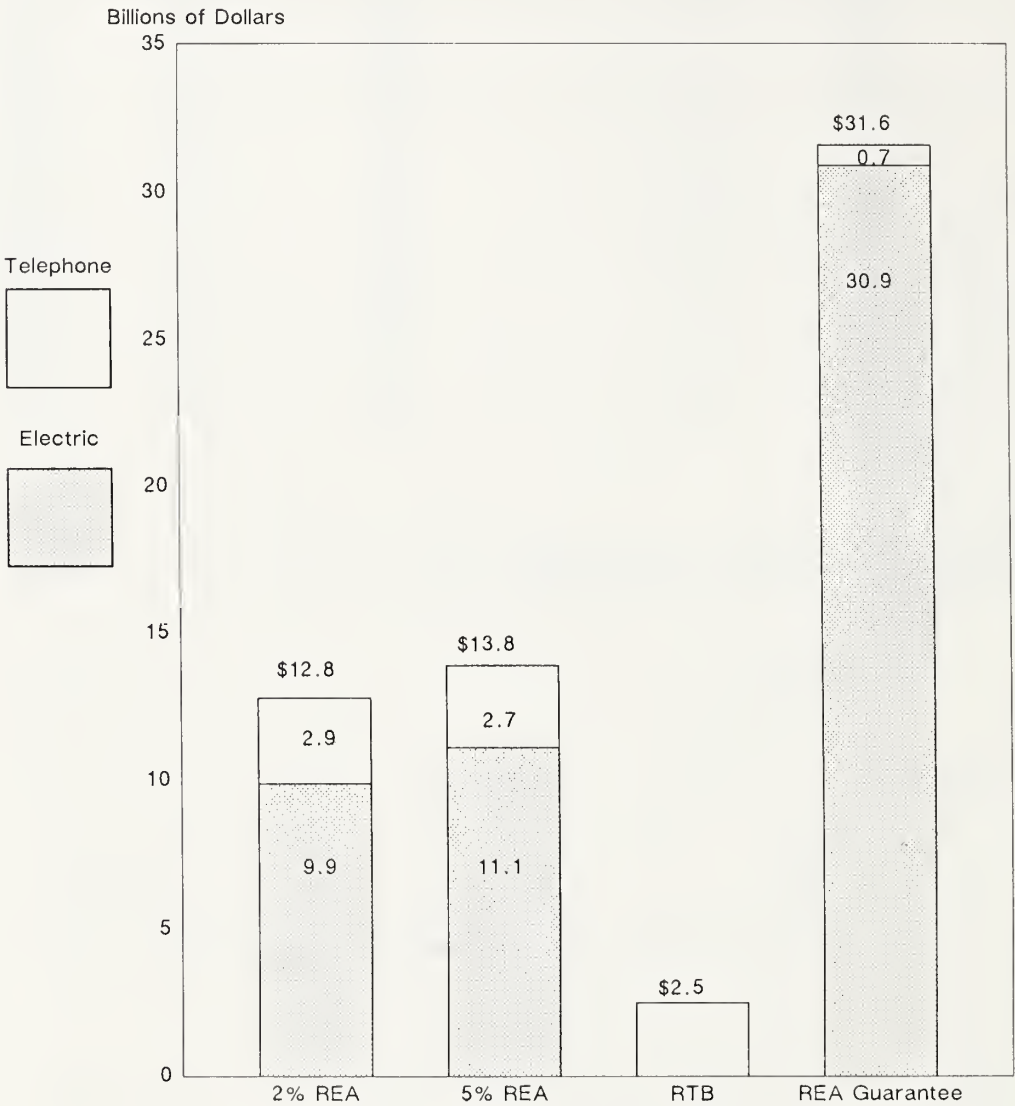


Table D-10: Cumulative REA Loans to Electric and Telephone Borrowers, as of Sept. 30, 1989

	Electric Loans	Telephone Loans
UNITED STATES	\$20,991,325,799	\$5,721,580,239
Alabama	408,687,006	168,176,119
Alaska	725,407,158	137,718,000
Arizona	206,110,419	42,995,000
Arkansas	683,228,151	102,380,326
California	75,516,523	84,981,614
Colorado	910,911,997	46,549,465
Connecticut		
Delaware	39,865,881	
Florida	678,852,153	42,897,463
Georgia	1,041,323,712	235,020,182
Hawaii		
Idaho	126,450,683	36,497,926
Illinois	468,064,454	75,738,105
Indiana	373,188,723	97,197,545
Iowa	624,212,475	138,427,207
Kansas	491,705,455	208,135,573
Kentucky	893,087,296	235,469,000
Louisiana	558,590,944	107,832,118
Maine	24,536,765	31,090,472
Maryland	160,104,500	2,061,000
Massachusetts		1,835,000
Michigan	340,236,631	103,294,571
Minnesota	913,112,479	271,608,037
Mississippi	582,752,504	96,016,974
Missouri	1,046,350,398	213,682,841
Montana	290,791,837	167,468,218
Nebraska	443,745,603	109,265,218
Nevada	72,431,368	7,603,000
New Hampshire	100,397,884	17,017,000
New Jersey	13,399,660	14,295,000
New Mexico	307,961,517	158,952,000
New York	27,718,891	41,761,159
North Carolina	633,112,300	201,058,323
North Dakota	882,869,253	182,627,114
Ohio	346,976,099	30,446,240
Oklahoma	852,280,736	203,355,066
Oregon	239,664,749	54,859,641
Pennsylvania	220,964,329	77,542,890
Rhode Island		
South Carolina	642,763,725	194,933,274
South Dakota	439,551,698	180,647,038
Tennessee	350,910,033	299,607,000
Texas	2,051,076,010	473,564,215
Utah	71,809,996	38,487,000
Vermont	53,515,918	4,785,000
Virginia	429,445,756	63,322,000
Washington	187,498,598	38,739,489
West Virginia	6,981,633	61,191,000
Wisconsin	457,148,178	249,450,805
Wyoming	229,426,593	11,797,000
Micronesia		41,000,000
Guam		106,298,000
Marshall Islands		18,800,000
Mariana Islands		11,212,000
Puerto Rico	266,157,000	115,677,000
Virgin Islands	430,126	66,214,000

Table D-11:

Cumulative REA Loan Guarantee Commitments  
and Rural Telephone Bank Loans, as of Sept. 30, 1989

	Guarantee Commitments		
	<u>Electric</u>	<u>Telephone</u>	<u>Rural Telephone Bank</u>
UNITED STATES	\$30,879,101,072	\$630,894,093	\$2,525,809,488
Alabama	338,201,000	11,901,000	98,855,850
Alaska	279,439,000	34,013,093	81,123,000
Arizona	337,679,000	5,000,000	99,024,283
Arkansas	877,928,762	35,744,000	49,254,503
California		10,396,000	55,614,300
Colorado	1,407,984,520		18,525,140
Connecticut			
Delaware			
Florida	865,457,000	76,556,000	50,275,184
Georgia	4,871,248,886	82,184,000	154,929,215
Hawaii			
Idaho			10,519,950
Illinois	977,608,000		21,858,232
Indiana	1,926,888,000		25,525,973
Iowa	256,223,000	9,700,000	55,089,783
Kansas	692,849,000	11,434,000	44,144,307
Kentucky	2,234,761,262	28,840,000	57,291,957
Louisiana	3,077,621,000	13,651,000	50,127,636
Maine		1,875,000	45,024,000
Maryland			4,080,300
Massachusetts			1,039,500
Michigan	822,063,000	2,953,000	82,823,717
Minnesota	1,231,940,000	10,239,000	91,619,401
Mississippi	713,709,000	5,200,000	16,120,449
Missouri	910,064,080	47,203,000	47,851,545
Montana	9,739,000		1,971,549
Nebraska			33,730,280
Nevada	1,689,000		7,585,854
New Hampshire	146,182,000		15,968,138
New Jersey		3,084,000	16,554,300
New Mexico	387,682,000		
New York		18,220,000	53,362,551
North Carolina	1,513,369,600	31,158,000	127,270,822
North Dakota	2,321,089,253		13,918,078
Ohio	72,110,000		7,623,525
Oklahoma	637,093,000	2,744,000	106,675,296
Oregon	54,128,000	18,228,000	39,792,139
Pennsylvania	607,713,000	43,247,000	246,754,113
Rhode Island			
South Carolina	523,036,000	7,885,000	164,785,020
South Dakota	13,628,000		16,453,759
Tennessee		14,358,000	72,508,800
Texas	1,156,645,986	76,131,000	172,892,445
Utah	1,036,341,723		10,210,200
Vermont	50,726,000		6,954,852
Virginia	263,000,000		20,201,318
Washington			19,960,235
West Virginia		5,250,000	18,421,200
Wisconsin	260,679,000	23,700,000	146,987,549
Wyoming	2,585,000		5,691,789
Micronesia			
Guam			19,609,800
Marshall Islands			
Mariana Islands			4,090,800
Puerto Rico			15,116,850
Virgin Islands			

Table D-12: REA Loans to Electric and Telephone Borrowers Fiscal Year 1989

		<u>Electric Loans</u>		<u>Telephone Loans</u>
UNITED STATES	175	\$622,050,000	61	\$214,149,000
Alabama	4	10,842,000	4	21,712,000
Alaska				
Arizona	3	18,327,000	1	3,085,000
Arkansas	5	41,925,000	1	4,000,000
California				
Colorado	3	14,326,000	1	373,000
Connecticut				
Delaware				
Florida	5	38,719,000		
Georgia	16	88,008,000	1	2,586,000
Hawaii				
Idaho			2	1,759,000
Illinois	3	6,797,000	1	1,636,000
Indiana	3	3,163,000	1	880,000
Iowa	2	3,331,000	4	3,475,000
Kansas	4	4,530,000	4	3,657,000
Kentucky	9	31,301,000		
Louisiana	1	1,610,000	2	5,886,000
Maine	3	878,000	1	385,000
Maryland	1	16,806,000		
Massachusetts				
Michigan	6	26,889,000	2	6,657,000
Minnesota	8	28,770,000	7	13,481,000
Mississippi	4	13,342,000	1	613,000
Missouri	12	24,961,000	3	22,392,000
Montana	3	5,870,000		
Nebraska	2	1,800,000	1	4,485,000
Nevada	1	5,393,000		
New Hampshire			2	3,180,000
New Jersey				
New Mexico	2	7,787,000	1	4,625,000
New York			1	869,000
North Carolina	12	51,713,000	2	5,739,000
North Dakota	5	13,384,000		
Ohio	7	8,918,000		
Oklahoma	4	7,924,000	3	6,469,000
Oregon	4	4,878,000		
Pennsylvania	5	12,653,000	2	4,010,000
Rhode Island				
South Carolina	7	32,243,000		
South Dakota	7	8,621,000	3	5,433,000
Tennessee	2	5,681,000		
Texas	11	43,516,000	3	11,144,000
Utah				
Vermont				
Virginia	3	22,960,000	1	4,729,000
Washington	1	2,725,000	1	1,111,000
West Virginia			1	120,000
Wisconsin	7	11,459,000	3	3,444,000
Wyoming				
Micronesia				
Guam				
Marshall Islands				
Mariana Islands				
Puerto Rico				
Virgin Islands			1	66,214,000



Table D-13:

REA Loan Guarantee Commitments  
and Rural Telephone Bank Loans, Fiscal Year 1989

	<u>Guarantee Commitments</u>		<u>Rural Telephone Bank</u>
	<u>Electric</u>	<u>Telephone</u>	
• UNITED STATES	\$39,502,000	\$0	\$177,044,700
Alabama			87,150
Alaska			
Arizona			14,716,800
Arkansas			1,155,000
California			9,955,050
Colorado			
Connecticut			
Delaware			
Florida			
Georgia			
Hawaii			
Idaho			
Illinois			1,803,900
Indiana			
Iowa			1,252,650
Kansas			1,648,500
Kentucky			7,964,250
Louisiana			
Maine			244,650
Maryland			1,753,500
Massachusetts			
Michigan	6,651,000		20,260,800
Minnesota			6,053,250
Mississippi			
Missouri	2,457,000		
Montana			
Nebraska			
Nevada			
New Hampshire			1,892,100
New Jersey			
New Mexico			
New York			
North Carolina			
North Dakota			
Ohio			507,150
Oklahoma			9,286,200
Oregon			
Pennsylvania			89,995,500
Rhode Island			
South Carolina			
South Dakota			
Tennessee			
Texas			
Utah			
Vermont			
Virginia			
Washington			262,500
West Virginia			
Wisconsin	30,394,000		8,205,750
Wyoming			
Micronesia			
Guam			
Mariana Islands			
Marshall Islands			
Puerto Rico			
Virgin Islands			

Table D-14:

**Loans, Advances and Unadvanced Funds, Fiscal Years (FY) 1984-1989**  
(Dollars in Millions)

	1984	1985	1986	1987	1988	1989
<u>REA Electric Loans</u>						
(a) Approved during FY	\$ 850.0	\$ 562.0	\$ 651.9	\$ 628.4	\$ 622.1	\$ 622.1
(b) Funds advanced during FY	592.2	661.2	731.5	590.7	582.0	713.0
(c) Approved but unadvanced, Sept. 30	1,754.0	1,646.9	1,557.9	1,551.4	1,555.7	1,413.9
<u>REA Telephone Loans</u>						
(a) Approved during FY	\$228.6	\$224.6	\$183.3	\$229.8	\$193.4	\$ 214.1
(b) Funds advanced during FY	187.8	135.9	229.3	161.4	175.3	167.2
(c) Approved but unadvanced, Sept. 30	775.0	838.9	781.3	848.2	847.3	889.1
<u>Rural Telephone Bank Loans</u>						
(a) Approved during FY	\$143.0	\$167.8	\$127.9	\$185.1	\$ 80.1	\$ 177.0
(b) Funds advanced during FY	90.5	72.7	71.7	52.0	119.4	97.0
(c) Approved but unadvanced, Sept. 30	589.6	665.3	674.6	792.2	688.2	709.4
<u>REA Loan Guarantee Commitments Electric</u>						
(a) Approved during FY	\$ 897.2	\$ 72.5	\$1,167.5	\$ 174.7	\$ 774.7	\$ 774.7
(b) Funds advanced during FY	2,399.6	2,188.9	1,333.6	567.7	198.4	225.3
(c) Approved but unadvanced, Sept. 30	11,090.6	7,214.3	4,903.4	5,378.9	5,718.4	3,700.2
<u>REA Loan Guarantee Commitments Telephone</u>						
(a) Approved during FY	\$105.1	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
(b) Funds advanced during FY	43.5	20.9	26.3	22.4	3.3	2.2
(c) Approved but unadvanced, Sept. 30	191.6	156.8	130.4	180.9	168.5	132.9



## BORROWER STATISTICS

Rural electric systems have historically had more rapid rates of increase in electric demand than the total electric utility industry. Since 1973, growth in electric usage has declined for both REA borrowers and the total industry.

Chart E-1: Annual Percent Change in Electricity Usage

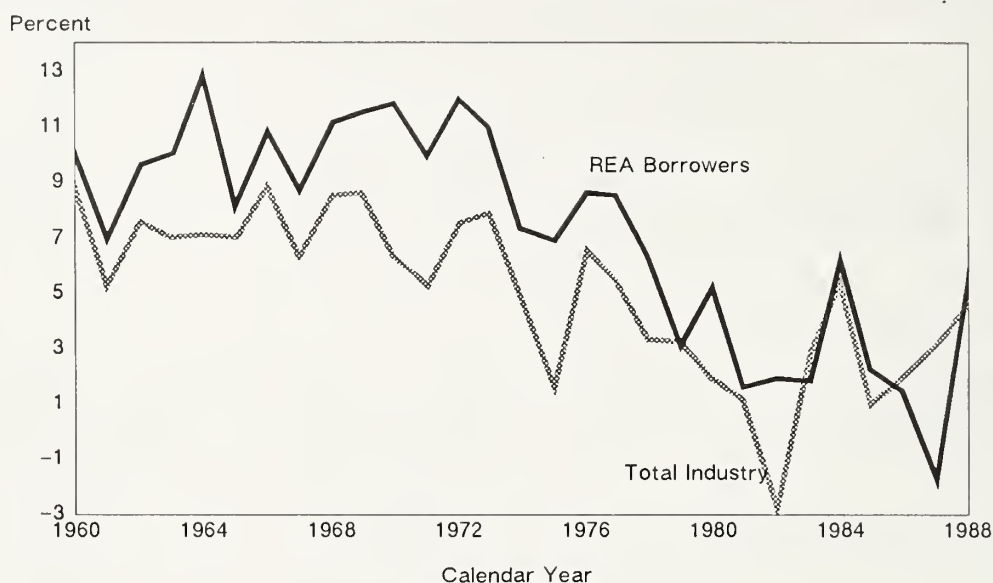


Table E-1: Growth Trends in Electricity Usage  
Annual Percent Change in kWh Sales to Ultimate Consumers

Year	REA Borrowers	Total Electric Utility Industry	Year	REA Borrowers	Total Electric Utility Industry
1960	10.2 %	9.0%	1975	7.0 %	1.9%
1961	7.2	5.5	1976	8.7	6.7
1962	9.7	7.7	1977	8.6	5.5
1963	10.1	7.1	1978	6.4	3.4
1964	13.1	7.2	1979	3.3	3.3
1965	8.4	7.1	1980	5.4	2.0
1966	11.0	9.0	1981	1.7	1.2
1967	8.9	6.5	1982	2.0	-2.4
1968	11.2	8.6	1983	1.9	2.9
1969	11.6	8.7	1984	6.5	5.6
1970	11.9	6.4	1985	2.3	1.1
1971	10.1	5.4	1986	1.5	2.1
1972	12.1	7.6	1987*	-1.4	3.2
1973	11.0	8.0	1988	5.9	4.7
1974	7.4	0.0			

\* During calendar year 1987, 26 distribution borrowers prepaid their REA debt and are no longer in the active borrower category; as a result, they are not reflected in the report for the current year.

Sources: REA Bulletin 1-1; Edison Electric Institute Statistical Yearbook.

Except for the slight decline in 1988, consumers served by rural electric systems have been charged increasingly higher prices for electricity since the early 1970's. These price increases came after a long period of steadily declining prices. However, it is interesting to note that when inflation is adjusted for, there has been very little real increase in electricity prices to rural electric consumers--electricity remains a very good buy. Rural electric consumers are paying far less for electricity today in constant dollars than they were in the early days of the rural electric program.

Chart E-2: Average Residential Price per kWh

REA Electric Distribution Borrowers

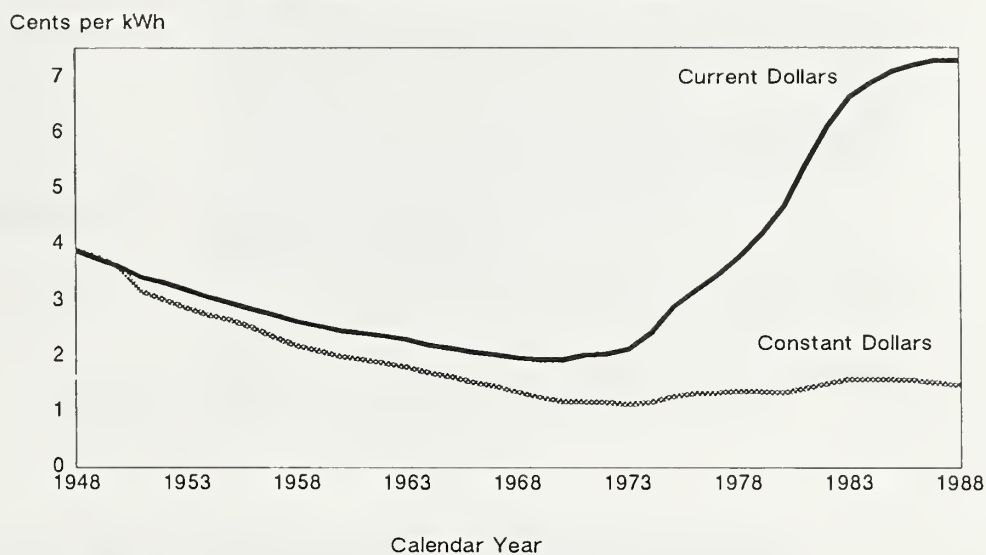


Table E-2: Average Residential Price per kWh Charged by REA Electric Distribution Borrowers

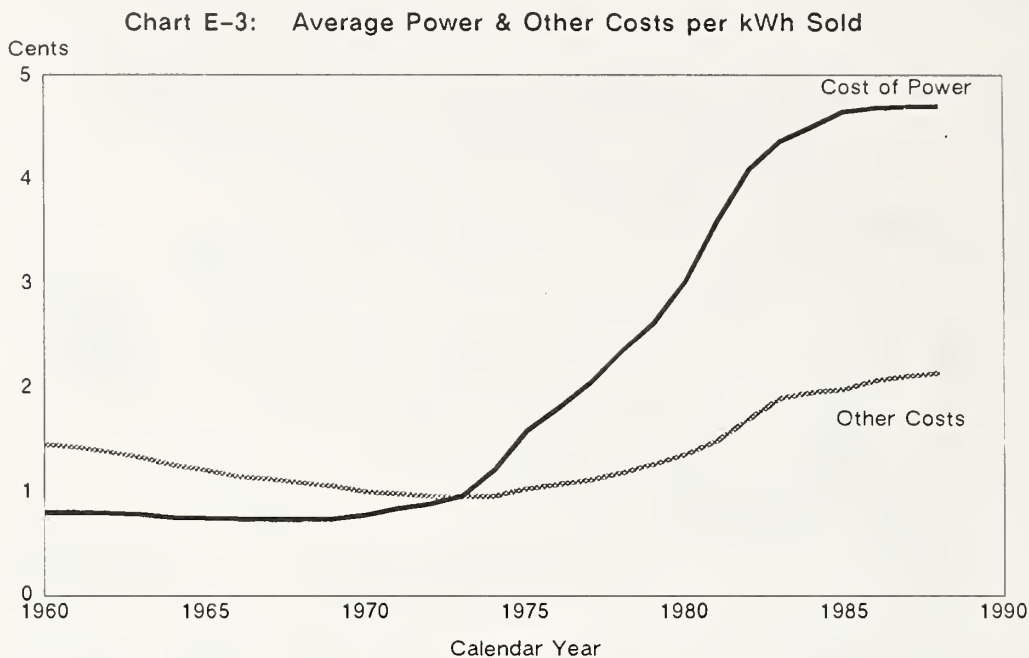
Year	Current*	Constant**	Year	Current*	Constant**
1948	3.92 ¢	3.92 ¢	1969	1.97 ¢	1.29 ¢
1949	3.77	3.81	1970	1.96	1.22
1950	3.63	3.63	1971	2.04	1.21
1951	3.44	3.19	1972	2.07	1.19
1952	3.35	3.04	1973	2.15	1.16
1953	3.22	2.90	1974	2.44	1.19
1954	3.09	2.77	1975	2.90	1.30
1955	2.98	2.68	1976	3.19	1.35
1956	2.87	2.54	1977	3.46	1.37
1957	2.77	2.37	1978	3.80	1.40
1958	2.65	2.21	1979	4.20	1.39
1959	2.57	2.12	1980	4.69	1.37
1960	2.49	2.02	1981	5.43	1.44
1961	2.44	1.96	1982	6.13	1.53
1962	2.39	1.90	1983	6.66	1.61
1963	2.33	1.83	1984	6.92	1.60
1964	2.23	1.73	1985	7.13	1.60
1965	2.17	1.66	1986	7.24	1.59
1966	2.10	1.56	1987	7.32	1.55
1967	2.06	1.49	1988	7.31	1.50
1968	2.00	1.38			

\* Current \$ = Dollars of the year.

\*\* Constant \$ = Dollars adjusted for inflation.

The Consumer Price Index was used to convert current dollars to constant dollars.

Electric rates charged rural electric consumers have increased mainly because of sharp escalation in the cost of power. In most cases, increases in the cost of distributing power have been more moderate. The cost of power has risen mainly because of : (a) increasing fuel costs; and (b) expensive new generating units that are coming on line.



**Table E-3: Average Power and Other Costs per kWh Sold**

Year	Cost of Power	Other Costs	Year	Cost of Power	Other Costs
1960	0.817 ¢	1.472 ¢	1975	1.593 ¢	1.039 ¢
1961	0.819	1.446	1976	1.813	1.082
1962	0.811	1.400	1977	2.056	1.129
1963	0.802	1.346	1978	2.364	1.192
1964	0.773	1.276	1979	2.631	1.277
1965	0.766	1.224	1980	3.031	1.369
1966	0.757	1.165	1981	3.606	1.504
1967	0.750	1.138	1982	4.105	1.712
1968	0.752	1.100	1983	4.383	1.912
1969	0.757	1.069	1984	4.522	1.970
1970	0.793	1.014	1985	4.672	1.998
1971	0.854	0.999	1986	4.711	2.083
1972	0.902	0.976	1987	4.723	2.127
1973	0.974	0.969	1988	4.725	2.157
1974	1.225	0.974			

Cost of Power includes power production expenses, transmission expense, and cost of purchased power.

Other Costs are calculated as total revenue from sales of electric energy less cost of power.

Source: REA Bulletin 1-1

## Electric Program

Most of the power distributed by rural electric systems is purchased from investor-owned utilities (IOU's) and publicly-owned utilities. However, there has been a long-term trend toward REA borrowers generating more of their consumers' power needs.

Chart E-4: Sources of Wholesale Power

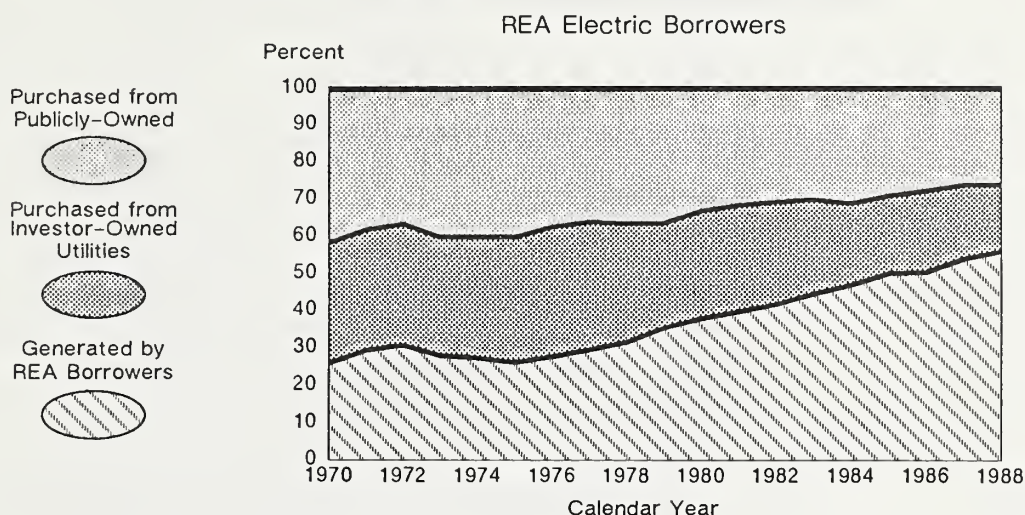


Table E-4: Sources of Wholesale Power for REA Electric Borrowers

Year	Generated by REA Borrowers		Purchased from Investor-Owned Utilities		Purchased from Other Public Sources	
	MWh	Percent	MWh	Percent	MWh	Percent
1970	20,637,751	26.3	25,375,456	32.3	32,524,169	41.4
1971	27,759,662	29.6	30,608,486	32.6	35,474,480	37.8
1972	32,290,340	31.0	34,153,465	32.7	37,832,238	36.3
1973	32,045,118	28.3	35,921,217	31.8	45,103,734	39.9
1974	32,795,053	27.7	38,515,457	32.5	47,057,050	39.8
1975	33,462,818	26.4	42,711,448	33.8	50,351,794	39.8
1976	38,660,059	28.0	48,100,273	34.8	51,498,254	37.2
1977	46,014,515	29.8	53,047,436	34.4	55,176,645	35.8
1978	52,472,215	31.9	52,220,422	31.8	59,725,947	36.3
1979	60,181,476	35.7	47,420,697	28.1	61,126,358	36.2
1980	69,536,829	38.2	52,614,304	28.9	59,864,121	32.9
1981	77,231,104	40.0	55,199,574	28.6	60,608,796	31.4
1982	81,568,123	42.0	53,083,098	27.4	59,372,827	30.6
1983	93,058,714	44.8	52,478,609	25.3	59,946,870	29.9
1984	106,753,172	47.2	49,651,328	22.0	69,698,465	30.8
1985	120,372,848	50.2	50,188,768	20.9	69,265,967	28.9
1986	120,831,669	50.6	52,133,122	21.9	65,703,843	27.5
1987	137,302,039	54.1	50,367,036	19.9	66,052,543	26.0
1988	147,851,823	56.2	47,576,308	18.1	67,878,472	25.8

SOURCE: REA Bulletin 111-2



The financial ratios of REA electric borrowers declined substantially during the latter half of the 1970's and into the 1980's when costs increased rapidly and were not matched by similar rate increases. Financial ratios of distribution borrowers have improved in the past few years, but those of power supply borrowers have remained very low.

Strong financial ratios are important because they affect the cost at which REA borrowers are able to obtain funds from private sources.

Chart E-5: Financial Ratios of REA Electric Borrowers

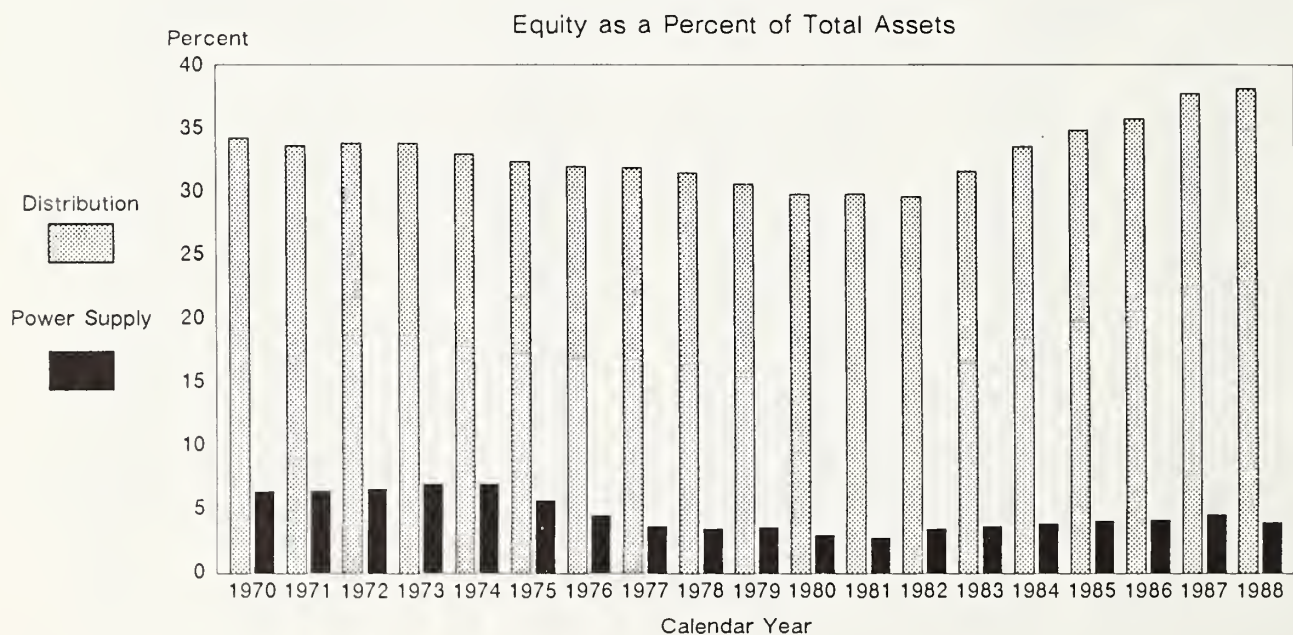
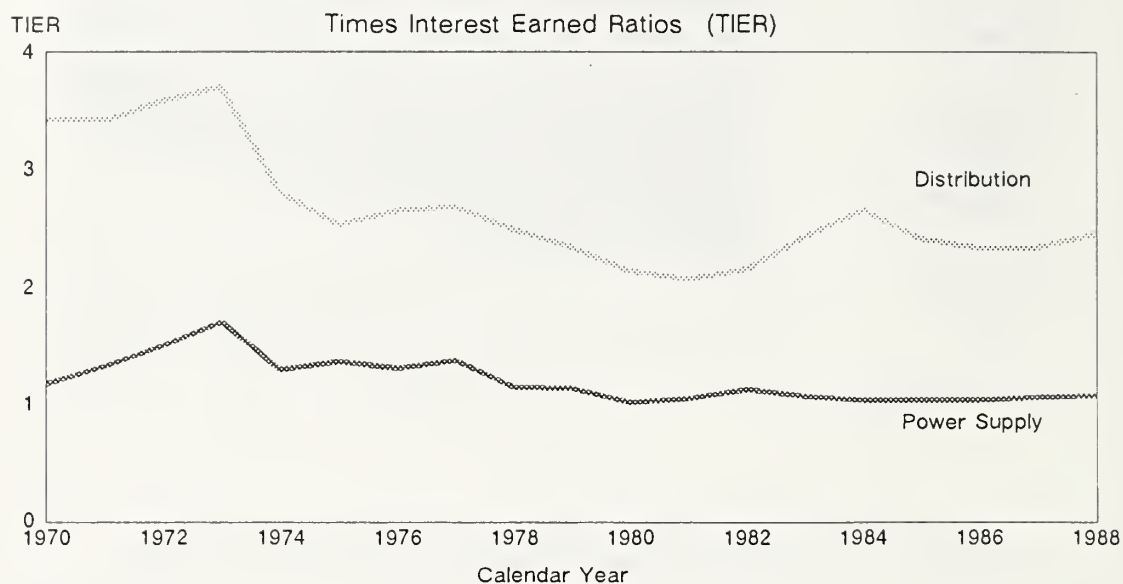




Table E-5: Financial Ratios of REA Electric Borrowers

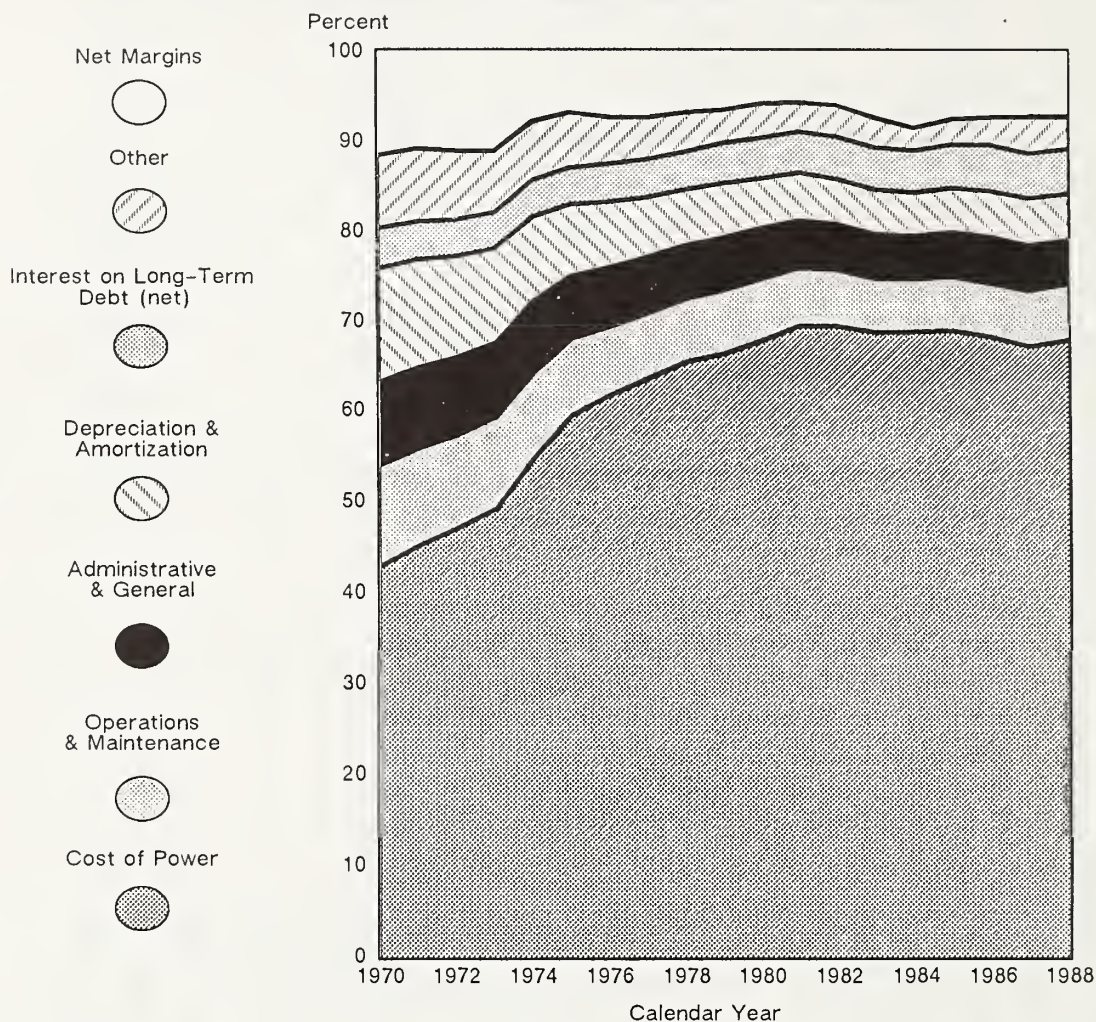
<u>Year</u>	Times Interest Earned Ratio (TIER)		Equity as a Percent of Total Assets	
	<u>Distribution</u> <u>Borrowers</u>	<u>Power Supply</u> <u>Borrowers</u>	<u>Distribution</u> <u>Borrowers</u>	<u>Power Supply</u> <u>Borrowers</u>
1970	3.45	1.20	34.3	6.4
1971	3.44	1.35	33.7	6.4
1972	3.61	1.53	33.9	6.6
1973	3.73	1.73	33.9	7.0
1974	2.83	1.32	33.0	7.0
1975	2.56	1.39	32.4	5.7
1976	2.68	1.33	32.0	4.5
1977	2.71	1.40	31.9	3.7
1978	2.52	1.17	31.5	3.5
1979	2.37	1.16	30.6	3.6
1980	2.16	1.04	29.8	3.0
1981	2.09	1.07	29.8	2.8
1982	2.18	1.15	29.6	3.5
1983	2.46	1.09	31.6	3.7
1984	2.69	1.06	33.6	3.9
1985	2.44	1.06	34.9	4.1
1986	2.36	1.06	35.8	4.2
1987	2.37	1.08	37.8	4.6
1988	2.48	1.10	38.2	4.0

Most of the revenue collected by REA electric distribution borrowers is used to pay for wholesale power. This component of cost has increased rapidly, and margins as a percent of total revenue have declined.

Interest expense represents only a small percentage of the revenue collected by distribution borrowers.

Chart E-6: Disposition of the Revenue Dollar

REA Electric Distribution Borrowers



**Table E-6: Disposition of the Revenue Dollar: REA Electric Distribution Borrowers**  
(Dollars in Thousands)

	1973		1974		1975		1976	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
<u>Total Operating Revenue</u>	\$1,840,930	100.0	\$2,233,854	100.0	\$2,867,288	100.0	\$3,436,513	100.0
Cost of Power	909,404	49.4	1,227,751	55.0	1,712,989	59.7	2,126,877	61.9
Operation & Maintenance	185,023	10.1	212,590	9.5	245,237	8.6	263,649	7.7
Administrative & General	154,279	8.3	175,542	7.9	199,490	7.0	232,464	6.7
Deprec. & Amort.	195,801	10.6	211,899	9.5	229,959	8.0	250,686	7.3
Int. on LT Debt (Net)	72,914	4.0	92,485	4.1	119,100	4.1	143,550	4.2
Other	124,339	6.8	144,311	6.5	174,190	6.1	178,295	5.2
Net Margins	199,170	10.8	169,276	7.5	186,323	6.5	240,992	7.0
	1977		1978		1979		1980	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
<u>Total Operating Revenue</u>	\$4,105,986	100.0	\$4,851,705	100.0	\$5,514,270	100.0	\$6,529,782	100.0
Cost of Power	2,620,763	63.8	3,189,470	65.7	3,672,897	66.6	4,449,392	68.1
Operation & Maintenance	300,200	7.3	340,134	7.0	392,919	7.1	453,149	6.9
Administrative & General	257,984	6.3	291,054	6.0	325,121	5.9	362,969	5.6
Deprec. & Amort.	274,547	6.7	301,942	6.2	331,899	6.0	364,704	5.6
Int. on LT Debt (Net)	171,016	4.2	203,156	4.2	245,532	4.5	295,524	4.5
Other	189,794	4.6	210,877	4.4	203,130	3.7	248,746	3.8
Net Margins	291,682	7.1	315,072	6.5	342,772	6.2	355,298	5.5
	1981		1982		1983		1984	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
<u>Total Operating Revenue</u>	\$7,705,652	100.0	\$8,955,397	100.0	\$9,854,024	100.0	\$10,811,893	100.0
Cost of Power	5,380,501	69.8	6,246,011	69.7	6,798,822	69.0	7,468,582	69.1
Operation & Maintenance	495,969	6.4	561,936	6.3	586,365	6.0	625,866	5.8
Administrative & General	407,395	5.3	456,511	5.1	495,842	5.0	529,564	4.9
Deprec. & Amort.	404,520	5.3	445,704	5.0	481,749	4.9	518,103	4.8
Int. on LT Debt (Net)	356,530	4.6	418,765	4.7	467,150	4.7	510,922	4.7
Other	247,832	3.2	310,936	3.5	323,060	3.3	274,814	2.5
Net Margins	412,905	5.4	515,534	5.7	701,036	7.1	884,042	8.2
	1985		1986		1987		1988	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
<u>Total Operating Revenue</u>	\$11,393,955	100.0	\$11,789,628	100.0	\$11,716,438	100.0	\$12,316,016	100.0
Cost of Power	7,889,914	69.2	8,080,345	68.5	7,913,818	67.5	8,382,065	68.1
Operation & Maintenance	681,569	6.0	709,924	6.0	726,287	6.2	766,604	6.2
Administrative & General	566,108	5.0	607,292	5.2	602,285	5.1	605,378	4.9
Deprec. & Amort.	558,344	4.9	596,359	5.1	609,840	5.2	645,103	5.2
Int. on LT Debt (Net)	554,195	4.9	597,142	5.1	588,037	5.0	616,026	5.0
Other	324,468	2.8	367,718	3.1	470,314	4.1	445,083	3.6
Net Margins	819,357	7.2	830,848	7.0	805,857	6.9	855,757	6.9



Most of the revenue collected by REA power supply borrowers is used for power production and to purchase wholesale power from other utilities. Increases in power production expenses are mainly due to increases in the cost of fuel.

Chart E-7: Disposition of the Revenue Dollar

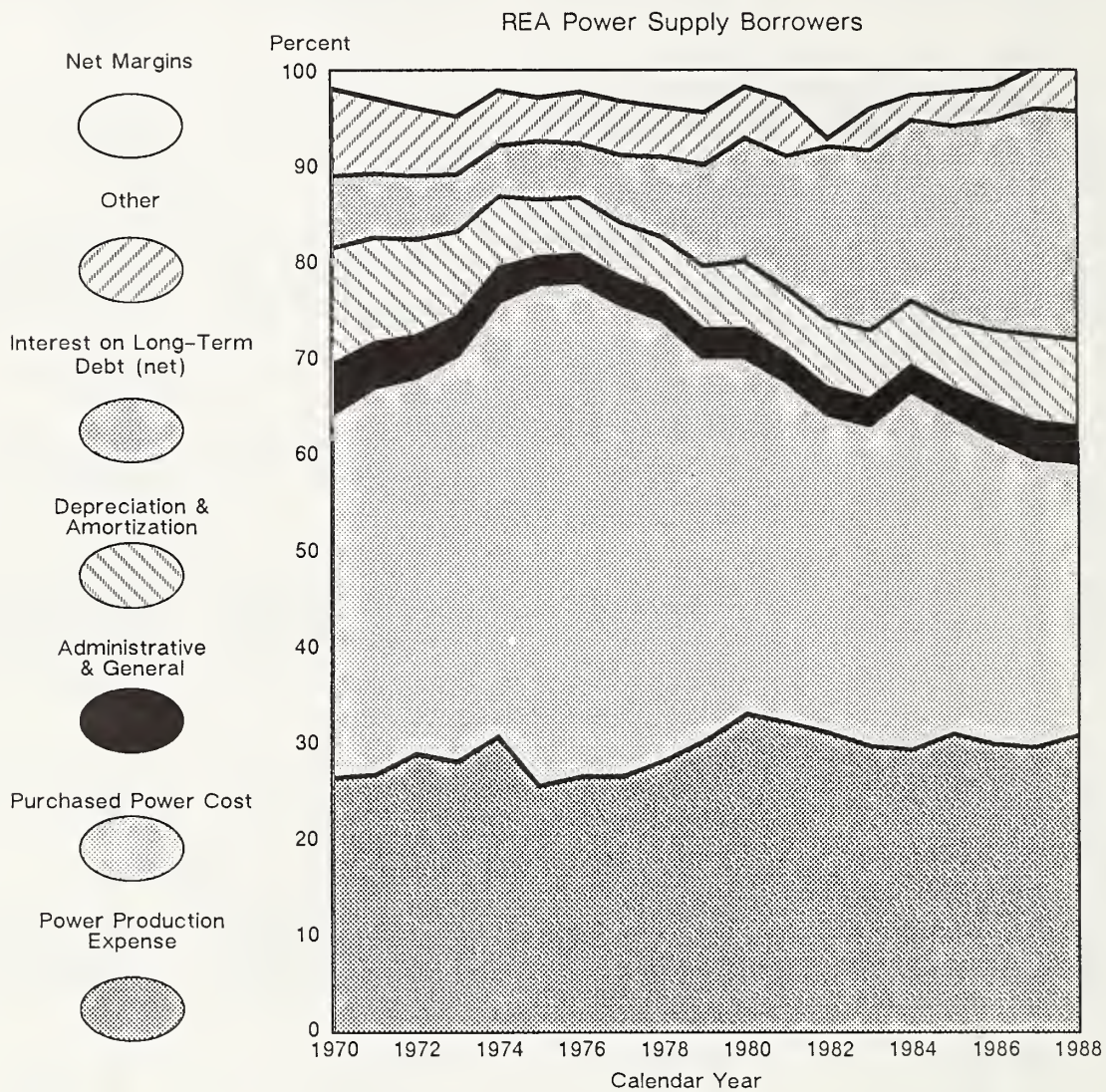


Table E-7:

Disposition of the Revenue Dollar: REA Power Supply Borrowers  
(Dollars in Thousands)

	1973		1974		1975		1976	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total Operating Revenue	\$496,813	100.0	\$671,272	100.0	\$1,020,400	100.0	\$1,289,355	100.0
Power Production Expense	141,215	28.4	208,643	31.1	264,262	25.9	345,874	26.8
Cost of Purchased Power	209,422	42.2	302,669	45.1	532,211	52.1	662,279	51.4
Administrative & General	19,947	4.0	23,778	3.5	29,163	2.8	37,511	2.9
Deprec. & Amort.	44,439	8.9	50,115	7.5	61,783	6.1	77,559	6.0
Int. on LT Debt (Net)	29,817	6.0	35,551	5.3	62,027	6.1	71,398	5.6
Other	30,302	6.1	39,311	5.8	46,594	4.6	71,120	5.5
Net Margins	21,671	4.4	11,205	1.7	24,360	2.4	23,614	1.8

	1977		1978		1979		1980	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total Operating Revenue	\$1,696,339	100.0	\$2,187,001	100.0	\$2,547,242	100.0	\$3,177,001	100.0
Power Production Expense	454,036	26.8	623,201	28.5	779,925	30.6	1,062,096	33.4
Cost of Purchased Power	833,160	49.1	1,000,883	45.8	1,013,511	39.8	1,175,428	37.0
Administrative & General	46,751	2.8	60,075	2.7	74,067	2.9	96,210	3.0
Deprec. & Amort.	96,944	5.7	129,430	5.9	168,949	6.6	223,829	7.0
Int. on LT Debt (Net)	120,122	7.1	183,175	8.4	269,294	10.6	411,407	12.9
Other	96,697	5.7	116,059	5.3	141,012	5.5	166,352	5.4
Net Margins	48,629	2.8	74,178	3.4	100,484	4.0	41,679	1.3

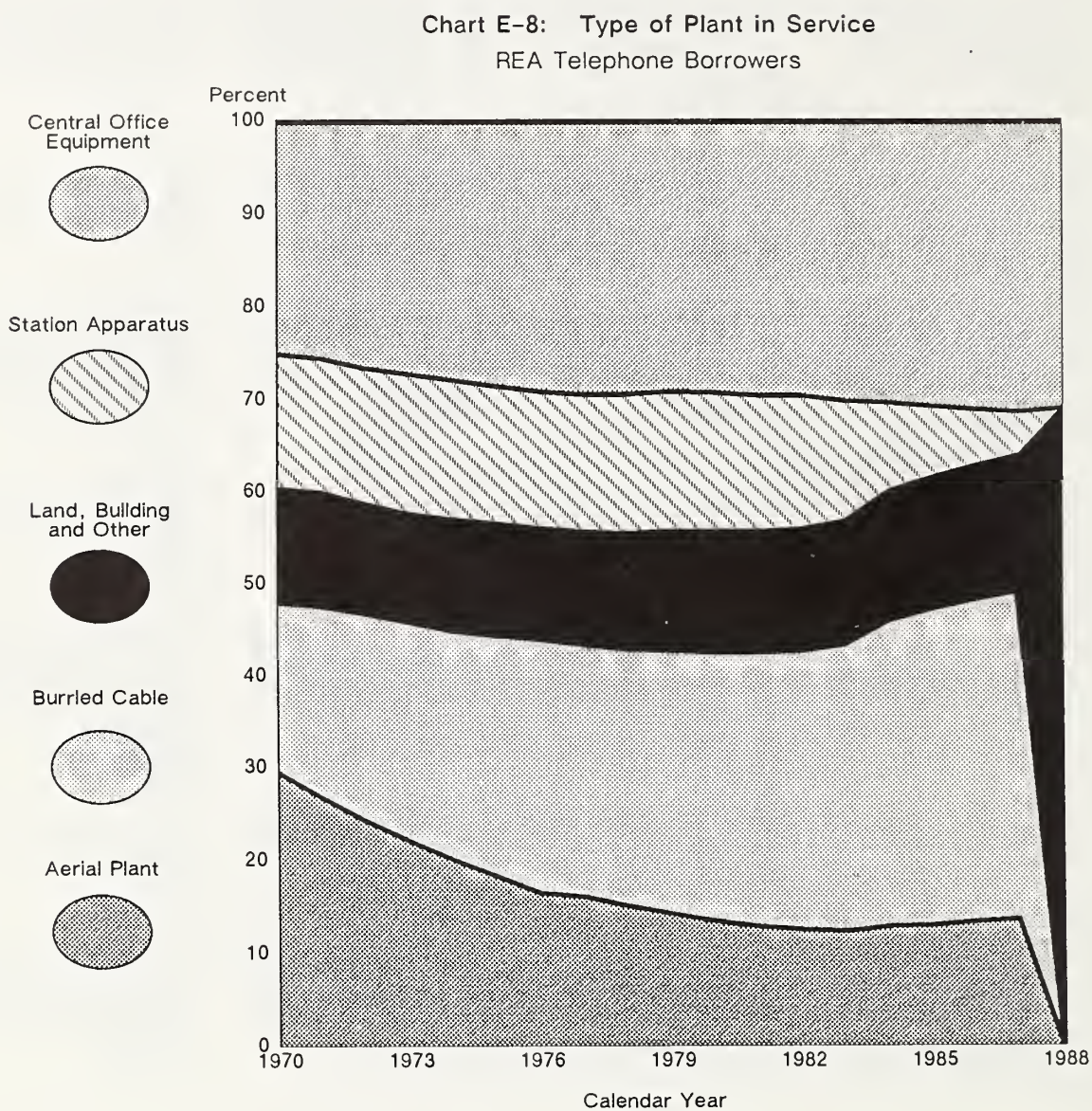
	1981		1982		1983		1984	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total Operating Revenue	\$4,089,724	100.0	\$5,026,911	100.0	\$5,882,166	100.0	\$7,190,267	100.0
Power Production Expense	1,327,829	32.5	1,577,119	31.4	1,763,088	30.0	2,129,566	29.6
Cost of Purchased Power	1,450,363	35.4	1,656,483	33.0	1,956,567	33.3	2,677,263	37.3
Administrative & General	114,931	2.8	141,768	2.8	157,404	2.7	187,043	2.6
Deprec. & Amort.	280,775	6.9	357,404	7.1	424,158	7.2	491,274	6.8
Int. on LT Debt (Net)	564,230	13.8	909,854	18.1	1,108,890	18.8	1,360,354	18.9
Other	245,505	6.0	46,485	0.9	259,040	4.4	184,891	2.6
Net Margins	106,091	2.6	337,798	6.7	213,019	3.6	159,876	2.2

	1985		1986		1987		1988	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total Operating Revenue	\$7,798,684	100.0	\$ 8,153,139	100.0	\$8,783,766	100.0	\$8,910,277	100.0
Power Production Expense	2,438,197	31.3	2,462,516	30.2	2,623,397	29.9	2,776,879	31.2
Cost of Purchased Power	2,582,408	33.1	2,587,840	31.7	2,629,523	29.9	2,518,139	28.3
Administrative & General	208,837	2.7	276,933	3.4	329,622	3.8	332,858	3.7
Deprec. & Amort.	554,571	7.1	647,179	7.9	799,156	9.1	808,159	9.1
Int. on LT Debt (Net)	1,588,356	20.4	1,784,361	21.9	2,080,839	23.7	2,126,767	23.9
Other	277,546	3.5	275,372	3.4	379,260	4.3	444,995	5.0
Net Margins	148,769	1.9	118,938	1.5	-58,031	-0.7	-97,520	-1.1



The main trends regarding the type of plant that rural telephone systems are building to serve their subscribers are: (a) buried cable is quickly replacing aerial plant; and (b) central office equipment is increasing as a percentage of the total.



Note: Due to changes in the Uniform System of Accounts as promulgated by the Federal Communications Commission, several categories of plant and expenses have been consolidated in 1988. Therefore, this chart is not readily comparable to prior years.

**Table E-8: Type of Plant in Service: REA Telephone Borrowers**  
(Dollars in Thousands)

	1973		1974		1975		1976	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Aerial Plant	\$ 603,435	22.3	\$ 629,171	20.3	\$ 646,194	18.5	\$ 677,880	16.7
Buried Cable	539,646	23.7	766,162	24.7	910,440	26.0	1,110,117	27.4
Land, Buildings & Other	318,415	11.8	379,098	12.2	426,827	12.2	489,938	12.1
Station Apparatus	406,770	15.1	469,224	15.1	520,577	14.9	598,480	14.8
Central Office Equipment	731,129	27.1	858,464	27.7	992,808	28.4	1,176,667	29.0
Total	\$2,699,395	100.0	\$3,102,119	100.0	\$3,496,846	100.0	\$4,053,082	100.0

	1977		1978		1979		1980	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Aerial Plant	\$ 770,373	16.3	\$ 823,309	15.3	\$ 881,086	14.5	\$ 942,358	13.7
Buried Cable	1,283,449	27.2	1,492,621	27.7	1,724,348	28.4	1,990,426	29.0
Land, Buildings & Other	580,679	12.3	678,351	12.6	788,006	13.0	900,231	13.1
Station Apparatus	703,181	14.9	810,473	15.1	918,001	15.1	1,035,624	15.1
Central Office Equipment	1,383,950	29.3	1,577,726	29.3	1,763,945	29.0	2,001,295	29.1
Total	\$4,721,632	100.0	\$5,382,480	100.0	\$6,075,386	100.0	\$6,869,934	100.0

	1981		1982		1983		1984	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Aerial Plant	\$ 993,164	13.1	\$1,082,725	12.8	\$1,144,646	12.6	\$1,274,846	13.1
Buried Cable	2,245,791	29.6	2,524,514	30.0	2,795,283	30.9	3,225,691	33.0
Land, Buildings & Other	996,291	13.1	1,122,753	13.3	1,215,307	13.4	1,362,515	14.0
Station Apparatus	1,118,827	14.8	1,222,583	14.5	1,190,245	13.1	942,570	9.7
Central Office Equipment	2,224,379	29.4	2,476,062	29.4	2,714,724	30.0	2,955,645	30.2
Total	\$7,578,452	100.0	\$8,428,637	100.0	\$9,060,205	100.0	\$9,761,267	100.0

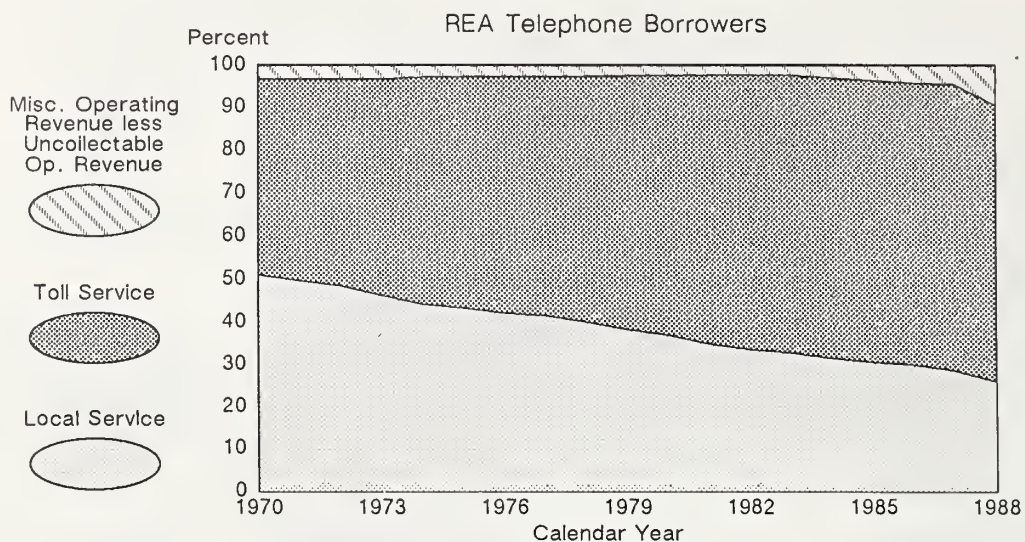
	1985		1986		1987		1988	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
Aerial Plant	\$ 1,355,944	13.2	\$ 1,428,020	13.6	\$ 1,544,154	13.9	NA	NA
Buried Cable	3,501,316	34.2	3,658,327	34.8	3,943,628	35.4	NA	NA
Land, Buildings & Other	1,468,551	14.3	1,531,767	14.6	1,648,752	14.8	\$ 8,014,611	69.2
Station Apparatus	784,131	7.7	643,572	6.1	523,469	4.7	NA	NA
Central Office Equipment	3,133,805	30.6	3,242,115	30.9	3,472,825	31.2	3,570,255	30.8
Total	\$10,243,747	100.0	\$10,503,801	100.0	\$11,132,828	100.0	\$ 11,584,866	100.0

Note: Due to changes in the Uniform System of Accounts as promulgated by the Federal Communications Commission, several categories of plant and expenses have been consolidated in 1988. Therefore, this table is not readily comparable to prior years.



An increasing percentage of the revenue collected by REA telephone borrowers has been obtained from toll revenues. Local service revenues have decreased in relative importance.

Chart E-9: Sources of Revenues



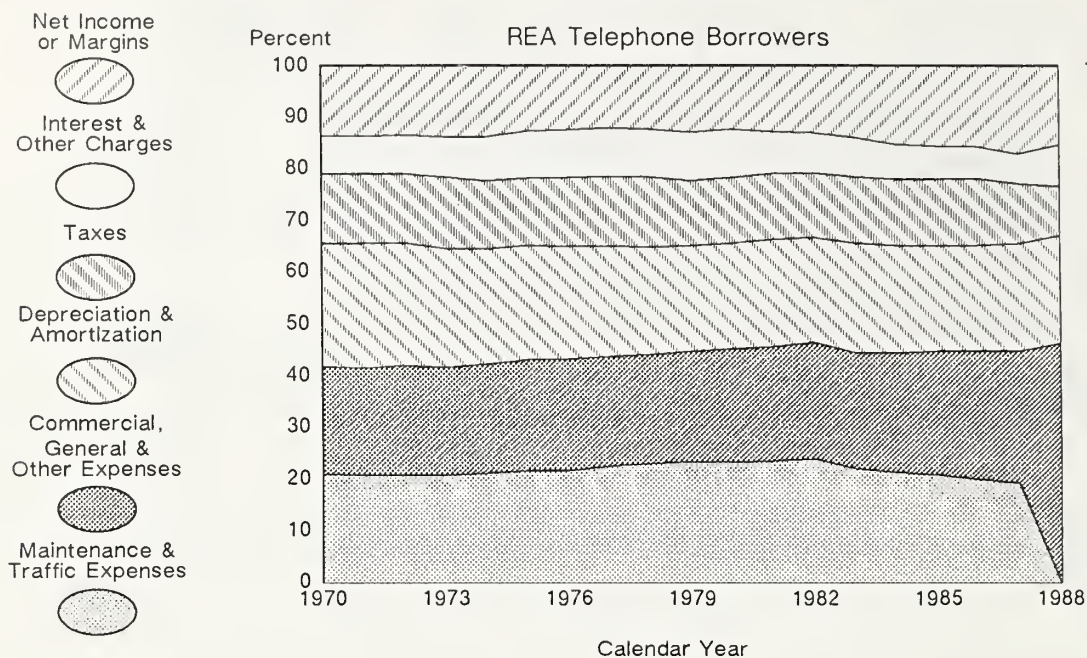
**Table E-9: Sources of Revenues: REA Telephone Borrowers**  
(Dollars in Thousands)

	1973		1974		1975		1976	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
Local Service Revenue	\$256,792	46.2	\$291,894	44.1	\$325,894	43.3	\$377,349	42.0
Net Toll Revenue	280,556	50.5	349,839	53.0	406,649	54.0	497,544	55.3
Misc Operating Revenues	21,472	3.9	23,132	3.5	25,928	3.4	30,125	3.3
- Uncollectable Op. Revenues	3,502	0.6	4,366	0.6	5,371	0.7	5,683	0.6
Total	\$555,318	100.0	\$659,732	100.0	\$753,100	100.0	\$899,335	100.0
	1977		1978		1979		1980	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
Local Service Revenue	\$ 449,804	41.4	\$ 522,406	40.0	\$ 586,323	38.1	\$ 648,608	36.9
Net Toll Revenue	606,795	55.8	748,912	57.4	913,310	59.3	1,066,488	60.7
Misc Operating Revenues	36,164	3.3	42,157	3.2	49,456	3.2	54,980	3.1
- Uncollectable Op. Revenues	6,159	0.5	8,213	0.6	9,346	0.6	12,336	0.7
Total	\$1,086,604	100.0	\$1,305,262	100.0	\$1,539,743	100.0	\$1,757,740	100.0
	1981		1982		1983		1984	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
Local Service Revenue	\$ 709,132	34.7	\$ 798,273	33.4	\$ 862,463	32.6	\$ 910,039	31.3
Net Toll Revenue	1,284,666	62.9	1,535,565	64.3	1,716,767	65.0	1,909,122	65.6
Misc Operating Revenues	61,498	3.0	70,237	2.9	77,265	2.9	102,417	3.5
- Uncollectable Op. Revenues	13,231	0.6	15,228	0.6	13,990	0.5	11,384	0.4
Total	\$2,042,065	100.0	\$2,388,847	100.0	\$2,642,505	100.0	\$2,910,194	100.0
	1985		1986		1987		1988	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
Local Service Revenue	\$ 947,561	30.5	\$ 952,101	29.9	\$ 950,755	28.5	\$ 931,117	25.9
Net Toll Revenue	2,044,198	65.8	2,094,884	65.9	2,235,394	66.9	2,324,182	64.6
Misc Operating Revenues	126,043	4.0	145,608	4.6	166,964	5.0	356,476	9.9
- Uncollectable Op. Revenues	9,579	0.3	11,800	0.4	13,686	0.4	13,485	0.4
Total	\$3,108,223	100.0	\$3,180,792	100.0	\$3,339,427	100.0	\$3,598,291	100.0

The major expenses of rural telephone borrowers have been relatively stable as a percent of their total revenue: there have been no dramatic trends among any of the major expense items.

Interest on long-term debt, like other items has been stable--accounting for about 10 percent of telephone borrower revenue for the past 20 years.

Chart E-10: Disposition of the Revenue Dollar



Note: Due to changes in the Uniform System of Accounts as promulgated by the Federal Communications Commission, several categories of plant and expenses have been consolidated in 1988. Therefore, this chart is not readily comparable to prior years.



Table E-10:

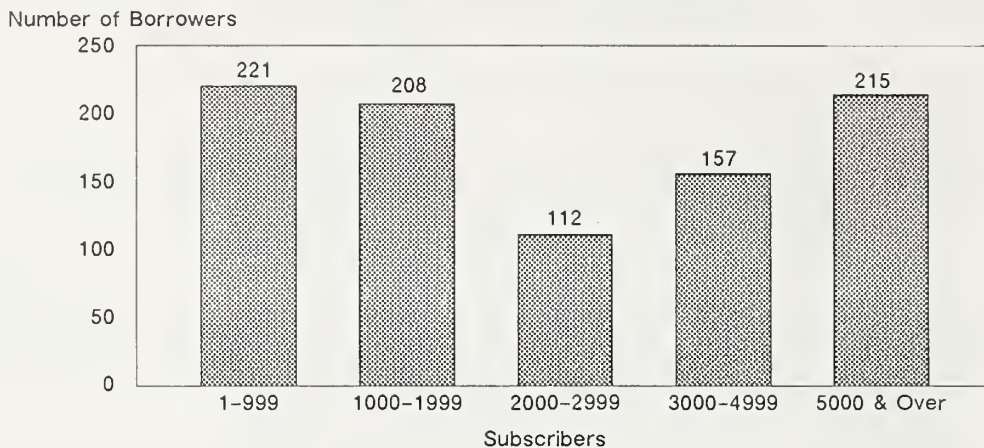
Disposition of the Revenue Dollar: REA Telephone Borrowers  
(Dollars in Thousands)

	1973		1974		1975		1976	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
<u>Total Operating Revenue</u>	\$555,318	100.0	\$659,732	100.0	\$753,100	100.0	\$899,335	100.0
Maintenance & Traffic	114,815	20.7	139,139	21.1	162,191	21.5	192,993	21.5
Commercial, General & Other	116,201	20.9	139,047	21.1	162,765	21.6	194,720	21.7
Depreciation & Amortization	127,728	23.0	146,475	22.2	166,709	22.1	195,087	21.7
Taxes	76,440	13.8	87,866	13.3	97,440	13.0	120,501	13.4
Interest on Long-term Debt (Net)	41,246	7.4	53,830	8.2	66,202	8.8	85,705	9.5
Other Fixed Charges	5,346	0.9	7,364	1.1	7,575	1.0	4,841	0.5
Other Income & Ded (Net) - unreg.	-3,259	-0.5	-5,250	-0.8	-5,238	-0.7	-6,909	-0.8
Net Income or Margin - regulated	76,801	13.8	91,261	13.8	95,456	12.7	112,397	12.5
	1977		1978		1979		1980	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
<u>Total Operating Revenue</u>	\$1,086,604	100.0	\$1,305,262	100.0	\$1,539,743	100.0	\$1,757,740	100.0
Maintenance & Traffic	242,908	22.4	298,834	22.9	337,938	23.3	405,560	23.1
Commercial, General & Other	231,746	21.3	277,085	21.4	329,888	21.4	387,127	22.0
Depreciation & Amortization	232,252	21.4	270,383	20.7	312,337	20.3	361,059	20.5
Taxes	147,213	13.5	178,101	13.7	196,064	12.7	222,568	12.7
Interest on Long-term Debt (Net)	101,997	9.4	117,456	9.0	140,605	9.1	167,764	9.6
Other Fixed Charges	6,662	0.6	11,536	0.9	18,920	1.2	21,701	1.2
Other Income & Ded (Net) - unreg.	-7,659	-0.7	-8,940	-0.7	-15,598	-1.0	-24,395	-1.4
Net Income or Margin - regulated	131,485	12.1	160,807	12.3	199,589	13.0	216,356	12.3
	1981		1982		1983		1984	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
<u>Total Operating Revenue</u>	\$2,042,065	100.0	\$2,388,847	100.0	\$2,642,505	100.0	\$2,910,194	100.0
Maintenance & Traffic	477,895	23.4	567,870	23.8	579,971	21.9	617,672	21.2
Commercial, General & Other	450,339	22.1	540,339	22.6	595,971	22.5	673,473	23.1
Depreciation & Amortization	423,536	20.8	483,498	20.3	557,648	21.1	603,913	20.8
Taxes	258,441	12.7	299,197	12.5	341,171	12.9	374,059	12.9
Interest on Long-term Debt (Net)	192,568	9.4	215,923	9.0	231,580	8.8	247,370	8.5
Other Fixed Charges	16,657	0.8	13,667	0.6	12,495	0.5	12,872	0.4
Other Income & Ded (Net) - unreg.	-39,027	-2.0	-45,240	-1.9	-44,707	-1.7	-64,916	-2.2
Net Income or Margin - regulated	261,656	12.8	313,593	13.1	369,061	14.0	445,751	15.3
	1985		1986		1987		1988	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
<u>Total Operating Revenue</u>	\$3,108,223	100.0	\$3,180,792	100.0	\$3,339,427	100.0	\$ 3,598,291	100.0
Maintenance & Traffic	644,601	20.7	629,105	19.8	637,393	19.1	NA	NA
Commercial, General & Other	746,603	24.0	793,704	25.0	852,404	25.5	1,658,715	46.1
Depreciation & Amortization	627,547	20.2	642,118	20.2	694,991	20.8	751,206	20.9
Taxes	402,353	13.0	418,039	13.1	390,864	11.7	345,923	9.6
Interest on Long-term Debt (Net)	261,690	8.4	265,183	8.3	274,736	8.2	276,539	7.7
Other Fixed Charges	10,537	0.3	8,379	0.3	6,535	0.2	11,267	0.3
Other Income & Ded (Net) - unreg.	-72,790	-2.3	-78,917	-2.5	-87,236	-2.6	NA	NA
Net Income or Margin - regulated	487,682	15.7	503,181	15.8	569,741	17.1	554,641	15.4

Note: Due to changes in the Uniform System of Accounts as promulgated by the Federal Communications Commission, several categories of plant and expenses have been consolidated in 1988. Therefore, this table is not readily comparable to prior years.

Most REA telephone borrowers are quite small businesses, in terms of the number of subscribers they serve. As of December 31, 1988, the average REA telephone borrower served 5,582 subscribers with an average of 7.1 subscribers per route mile.

**Chart E-11: Subscribers Served per REA Telephone Borrower  
as of December 31, 1988**



Selected operating ratios of borrowers for 1988 and the 4 prior years are presented below. The ratios of total operating revenues and net operating income or margin to average plant in service show an increase from 30.9 to 31.7 and from 6.8 to 7.5 respectively, in a comparison of 1984 with 1988. The depreciation expense ratio has also shown an increase in this period. The accrual ratio in the 5-year period has decreased slightly from 86.9 in 1984 to 84.6 in 1988.

**Table E-11: Operating Ratios of REA Telephone Borrowers**

	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988*</u>
Dollars per subscriber:					
Investment					
(Total Telephone Plant)	\$2,147.66	\$2,226.74	\$2,259.09	\$2,322.10	\$2,368.39
Plant in service	2,056.34	2,137.61	2,173.78	2,224.70	2,272.94
Plant in service less dep. and amort. reserves	1,404.88	1,425.10	1,423.00	1,427.36	1,525.02
Total assets	1,908.38	1,979.70	2,047.67	2,087.78	2,102.97
Percent of average plant in service:					
Total operating revenues	30.9 %	31.2 %	31.2 %	30.8 %	31.9 %
Maintenance expenses	5.7	5.6	5.4	5.1	NA
Depreciation expenses	6.2	6.2	6.1	6.2	6.7
All other operating expenses and taxes	12.1	12.5	12.8	12.4	17.7
Net Operating income or margin	6.8	6.9	6.8	7.0	7.5
Percent of total operating revenue:					
Total operating deductions and					
Fixed charges (accrual ratio)	86.9	86.7	86.7	85.6	84.7
Other income and deduction (net) - unreg.	2.2	2.3	2.5	2.6	NA
Net income or margin-regulated	15.3	15.7	15.8	17.1	15.4

\* Due to changes in the Uniform System of Accounts as promulgated by the Federal Communications Commission, several categories of plant and expenses have been consolidated in 1988. Therefore, this table is not readily comparable to prior years.

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