THE ELECTRICAL INDUSTRIES

INTRODUCTION AND GENERAL EXPLANATIONS

Scope of the census.—The census of electrical industries, which has been taken quinquennially since 1902, covers four distinct industries, namely: (1) Central electric light and power stations; (2) electric railways; (3) telephones; and (4) telegraphs. In addition, the electric-railway report gives statistics for motor-bus lines operated by electric-railway companies directly and through subsidiary or affiliated companies, and as successors to electric-railway operations. This report presents a summary for the four electrical industries listed, and detailed statistics for central electric light and power stations. The reports for the other three industries are published separately, with a section on motor-bus lines in the electric-railway report.

Capitalization.—The capitalization figures for the electric railway, telephone, and telegraph industries, represent the book value (in most cases, the par value) of capital stock, funded debt, and real-estate mortgages, except that mortgages were not included for 1902. However, for light and power stations the value of plant and equipment, not capitalization, was shown in all years prior to 1932 when the schedule called for "fixed capital." Doubtless, the data for fixed capital for 1932 are, in most cases, the value of plant and equipment.

Light and power departments operated by electric railways.—The light and power industry comprises both commercial and municipal central electric stations, including light and power plants operated by electric-railway companies. At earlier censuses it was impossible, in some cases, to obtain separate and detailed returns for the light and power departments of electric railways (except in regard to income), and their energy output, capitalization, revenues, expenses, etc., were, therefore, credited in those reports entirely to electric railways, thus, to a certain extent, inflating the figures for that industry, and deflating them for the electric light and power industry. However, the revenues of these light and power departments were tabulated separately. (See footnote 13, table 1 of this report.) At the census for 1922, data for the light departments of 124 railways were included in the electric-railway report. However, for 1927 and 1932, it was possible to obtain separate data for the light and power departments of all electric-railway companies, except 17 for 1927 and 3 for 1932. These companies were unable to separate their light and power data from their railway operations, but these companies were relatively unimportant. Light and power departments making separate returns have been rated, for the purposes of this report, as independent light and power establishments.

Operating and lessor electric-railway companies.—The electric-railway industry embraces both operating and nonoperating, or lessor, companies. The lessor companies did not report the numbers and the compensation of employees, so that the statistics in regard to employees and salaries and wages refer to operating companies only. The employees of the lessor companies (who are principally of the salaried class) are, however, relatively few in number. All organization and maintenance expenses of the lessor companies are included under "Expenses." The duplication in income and expenses arising from the payment, by operating companies to lessor companies, of rentals for leased roads, reported as expenses by operating companies and as income by lessor companies, has been eliminated.

GENERAL SUMMARY

Developments since 1902.—The 30-year period from 1902 to 1932 was one of remarkable growth in the group of electrical industries as a whole and in each individual industry, except electric railways which showed increases in practically all items up to the year 1922, but showed decreases in the subsequent census periods. The value of all plants and equipment was more than 6 times as large in

1932 as in 1902, or an increase of 559.1 percent; income, nearly 9 times, or an increase of 750.1 percent; net income, more than 6 times, or an increase of 505.6 percent; number of employees, about 3 times, or an increase of 193.4 percent; and salaries and wages 7 times, or an increase of 606.3 percent.

The electric light and power industry shows the greatest development in this period. Value of plant and equipment increased 2,409.1 percent; income, 2,417.2 percent; salaries and wages, 1,468.7 percent; and number of employees, 706.5 percent. In most respects, but not in the number of employees or in salaries and wages, it has become the largest industry of the electrical group. Telephones rank next in rate of growth, showing increases of 1,105.1 percent in income, 1,116.3 percent in value of plant and equipment, 307.3 percent in number of employees, and 1,145.3 percent in salaries and wages. This industry leads the group in respect to number of employees and salaries and wages paid.

Electric railways are third in number of employees, salaries and wages, and value of plant and equipment. These items ranked second in 1927, but show a general decrease in the 1927–32 period. In rate of increase, this industry is now in fourth place. In the 30-year period, it shows an increase of 29.4 percent in employees, 219.5 percent in salaries and wages, 84.9 percent in value of plant and equipment, and 149.9 percent in income. The "net income" shows a deficit of $9,456,534 for the year 1932. The telegraph industry (not including railway telegraphs) ranks fourth in magnitude as measured by number of employees, annual income, and value of plant and equipment.

Decreases in numbers of companies, establishments, or systems (table 1).—All of the electrical industries show decreases in number of companies, establishments, or systems in the 30-year period. Data as published for telephones for 1902 are not strictly comparable with later years, since there was no income limit for that year. In the 1927–32 period all electrical industries show decrease in number of establishments.

Rate of increase in number of employees and in salaries and wages (table 1).—The advances in wage scales from census to census are brought out forcibly by the percentages of increase shown in table 1. For every 5-year period and for every industry the rate of increase in salaries and wages was higher or (for electric railways between 1922 and 1927) the rate of decrease was lower, than that in number of employees. The combined rate for all industries for the 30-year period as a whole is more than three times as large for salaries and wages as for number of employees and that relating to the 10-year period is more than 10 times as large for salaries and wages as for number of employees.

Rate of increase in value of plant and equipment and in revenue (table 1).—For the 1927–32 period, the rate of increase in the value of plant and equipment exceeds that of revenue in electric light and power stations, telephones, and telegraphs. Electric railways show a decrease in both items but the telegraph industry in revenue only. The group as a whole shows an increase in the value of plant and equipment.

Rates of increase in income and expenses (table 1).—Until 1922, the rates of increase in expenses, in general, exceeded those of income, the net income having increased, therefore, at a smaller rate than the gross. In the period from 1922 to 1927, a reversal in the electric light and power industry occurred, and the income increased at a greater rate than the expense. This condition was reversed in the 1927–32 period, and the rate of increase for expenses was larger than the revenue. In electric railways, the rate of decrease in revenue was larger than the rate of decrease in expense of the industry. During the 30-year period, revenues increased at greater rate than expenses in the electric light and power industry, while the contrary is true for the electric-railway industry.

Relative importance of industries (table 1).—It will be seen from the "Percent of aggregate" figures that the relative importance of the light and power industry has increased and that of the electric railway has decreased from census to census. Until, and including 1917, the electric railway industry reported more than half the total value of plant and equipment of all electrical industries, and for 1922 it reported a larger value than any other electrical industry. In 1927 and 1932, the electric light and power industry represented more than half of the aggregate.

The income percent of aggregate shows that the electric light and power industry was almost three times as large in 1932 as in 1902, while the electric-railway industry was less than one third as large in the later year as in the earlier one.

Comparison of prime movers in light and power plants and in electric-railway plants (table 2).—During the period 1912–32, the horsepower of prime movers used by central electric light and power establishments increased 537 percent.

On the other hand, the horsepower of electric-railway plants, after reaching its maximum in 1917, fell off slightly between that year and 1922, while in the 20-year period from 1912 to 1932, it decreased 58.2 percent. This decrease is due in part to the competition of the automobile and the public-utility motor bus, and the increasing tendency to centralize electric-power production in plants operated by electric light and power companies, which can often supply energy to electric railways at a cheaper rate than railways can generate it.

Comparison of generator capacity and generated output in electric light and power plants and in electric-railway plants (table 3).—Generators (rated kilowatt capacity) in light and power establishments increased 141.9 percent in the 1922–32 period, while the generator capacity of railways decreased 62.1 percent in this period. The amount of current generated (kilowatt-hours) increased 97.7 percent in electric light and power establishments in the 10-year period, while the generated output reported by electric railways decreased 62.4 percent. In this period, the generator capacity of electric light and power establishments showed 44.2 percent greater increase than the increase in percent of energy generated.

TABLE 1.—SUMMARY, BY INDUSTRIES: 1902 TO 1932

ITEM AND CENSUS YEAR	Total	CENTRAL ELECTRIC LIGHT AND POWER ESTABLISHMENTS			Electric railways [1]	Telephones [2]	Telegraphs [3] (land and ocean)	PERCENT OF TOTAL			
		Total	Commercial	Municipal				Electric light and power	Electric railways	Telephones	Telegraphs
Number of companies, establishments, or systems 1932	5,076	3,429	1,627	1,802	706	918	23	67.6	13.9	18.1	0.5
1927	6,691	4,335	2,137	2,198	963	1,368	25	64.8	14.4	20.4	0.4
1922	8,903	6,355	3,774	2,581	1,200	1,323	25	71.4	13.5	14.8	0.3
1917	10,076	6,542	4,224	2,318	1,307	2,200	27	64.9	13.0	21.8	0.3
1912	8,424	5,221	3,659	1,562	1,260	1,916	27	62.0	15.0	22.7	0.3
1907	7,612	4,714	3,462	1,252	1,236	1,636	26	61.9	16.2	21.5	0.3
1902	8,783	3,620	2,805	815	987	4,151	25	41.2	11.2	47.3	0.3
Percent increase or decrease (−) 1902–32	−42.2	−5.3	−42.0	121.1	−28.5	−77.9	−8.0				
1927–32	−24.1	−20.9	−23.9	−18.0	−26.7	−32.9	−8.0				
1922–27	−24.8	−31.8	−43.4	−14.8	−19.8	3.4					
1917–22	−11.6	−2.9	−10.7	11.3	−8.2	−39.9	−7.4				
1912–17	19.6	25.3	15.4	48.4	3.7	14.8					
1907–12	10.7	10.8	5.7	24.8	1.9	17.1	3.8				
1902–07	−13.3	30.2	23.4	53.6	25.2	−60.6	4.0				
Employees 1932	814,224	244,573	225,557	19,016	182,165	320,763	[4] 66,723	30.0	22.4	39.4	8.2
1927	956,372	251,020	234,747	16,273	267,115	356,739	[4] 81,498	26.3	27.9	37.3	8.5
1922	810,250	150,762	136,105	14,657	300,523	290,333	[4] 68,632	18.6	37.1	35.8	8.5
1917	709,580	105,541	94,679	10,862	294,826	244,490	[4] 64,723	14.9	41.5	34.5	9.1
1912	582,452	79,335	71,395	7,940	282,461	183,361	[5] 37,295	13.6	48.5	31.5	6.4
1907	428,765	47,632	42,066	5,566	221,429	131,670	[4] 28,034	11.1	51.7	30.7	6.5
1902	277,474	30,326	26,909	3,417	140,769	78,752	[4] 27,627	10.9	50.7	28.4	10.0
Percent increase or decrease (−) 1902–32	193.4	706.5	738.2	456.5	29.4	307.3	141.5				
1927–32	−14.9	−2.6	−3.9	16.9	−31.8	−10.1	−18.1				
1922–27	18.0	66.5	72.5	11.0	−11.1	22.9	18.7				
1917–22	14.2	42.8	43.8	34.9	1.9	18.8	6.0				
1912–17	21.8	33.0	32.6	36.8	4.4	33.3	73.5				
1907–12	35.8	66.6	69.7	42.7	27.6	39.3	33.0				
1902–07	54.5	57.1	56.3	62.9	57.3	67.2	1.5				

Salaries and wages	1932	$1,131,139,323	$323,880,386	$303,058,030	$20,822,347	$281,832,170	$451,477,844	$73,948,923	28.6	24.9	39.9	6.5
	1927	1,384,944,391	367,631,756	367,631,756	(6)	441,951,958	475,840,320	99,520,357	26.5	31.9	34.4	7.2
	1922	1,075,812,538	212,432,655	194,148,121	18,284,534	445,680,135	341,537,822	76,161,926	19.7	41.4	31.7	7.1
	1917	575,901,487	95,241,858	86,473,496	8,768,362	267,240,362	169,655,066	43,764,201	16.5	46.4	29.5	7.6
	1912	383,058,415	61,161,941	55,658,515	5,503,426	200,890,939	96,040,541	[7] 24,964,994	16.0	52.4	25.1	6.5
	1907	269,229,021	35,420,324	31,935,309	3,485,015	150,991,090	65,009,349	17,808,249	13.2	56.1	24.1	6.6
	1902	160,152,151	20,646,692	18,766,970	1,879,722	88,210,165	36,255,621	15,039,673	12.9	55.1	22.6	9.4
Percent increase or decrease (−)	1902-32	606.3	1,468.7	1,514.8	1,007.7	219.5	1,145.3	391.7	------	------	------	------
	1927-32	−18.3	−11.9	−17.6	------	−36.2	−5.1	−25.7	------	------	------	------
	1922-27	28.7	73.1	89.4	------	−0.8	39.3	30.7	------	------	------	------
	1917-22	86.8	123.0	124.5	108.5	66.8	101.3	74.0	------	------	------	------
	1912-17	50.3	55.7	55.4	59.3	33.0	76.6	75.3	------	------	------	------
	1907-12	42.3	72.7	74.3	57.9	33.0	47.7	40.2	------	------	------	------
	1902-07	68.1	71.6	70.2	85.4	71.2	79.3	18.4	------	------	------	------
Plant and equipment	1932	22,173,034,041	[8] $12,664,376,952	[8] $12,124,807,425	[8] $539,569,527	[9] $4,267,505,955	$4,734,705,708	$506,445,426	57.1	19.2	21.4	2.3
	1927	17,496,162,107	[10] 9,297,458,356	[10] 8,880,291,499	417,166,857	[9] 4,296,743,053	3,475,201,956	426,698,742	53.1	24.6	19.9	2.4
	1922	12,368,245,858	4,465,015,691	4,229,356,023	235,659,668	[9] 5,446,794,547	2,129,773,760	326,661,860	36.1	44.0	17.2	2.6
	1917	10,271,886,533	3,060,392,141	2,933,016,941	127,375,200	[9] 5,532,223,818	1,435,912,142	243,358,432	29.8	53.9	14.0	2.4
	1912	8,193,823,625	2,175,678,266	2,098,613,122	77,065,144	[9] 4,714,665,386	1,081,433,227	222,046,746	26.6	57.5	13.2	2.7
	1907	5,906,208,490	1,096,913,622	1,054,034,175	42,879,447	[9] 3,778,831,901	820,417,008	210,045,959	18.6	64.0	13.9	3.6
	1902	3,363,980,262	504,740,352	482,719,879	22,020,473	[9] 2,308,282,099	389,278,232	161,679,579	15.0	68.6	11.6	4.8
Percent increase or decrease (−)	1902-32	559.1	2,409.1	2,411.8	2,350.3	84.9	1,116.3	213.2	------	------	------	------
	1927-32	26.7	36.2	36.5	29.3	−0.7	36.2	18.7	------	------	------	------
	1922-27	41.5	108.2	110.0	77.0	−21.1	63.2	30.6	------	------	------	------
	1917-22	20.4	45.9	44.2	85.0	−1.5	48.3	34.2	------	------	------	------
	1912-17	25.4	40.7	39.8	65.3	17.3	32.8	9.6	------	------	------	------
	1907-12	38.7	98.3	99.1	79.7	24.8	31.8	5.7	------	------	------	------
	1902-07	75.6	117.3	118.4	94.7	63.7	110.8	29.9	------	------	------	------
Income	1932	$3,944,360,333	[11] $2,157,295,489	[11] $2,030,997,052	[11] $126,298,437	$626,072,251	[12] $1,046,336,897	$114,655,696	54.7	15.9	26.5	2.9
	1927	4,108,483,485	[11] 1,963,664,324	[11] 1,841,227,495	[12] 122,436,829	964,909,711	[12] 996,911,752	182,997,698	47.8	23.5	24.3	4.5
	1922	2,930,602,565	[13] 1,072,119,883	986,684,273	85,435,610	1,049,800,688	656,823,908	151,858,086	36.6	35.8	22.4	5.2
	1917	1,739,664,159	[13] 526,394,240	486,634,021	40,260,219	730,564,691	372,501,800	109,703,428	30.3	42.0	21.4	6.3
	1912	1,207,321,573	[13] 302,273,398	279,054,409	23,218,989	586,391,363	253,893,969	64,762,843	25.0	48.6	21.0	5.4
	1907	833,133,222	[13] 175,642,338	161,630,339	14,011,999	430,156,570	175,750,446	51,583,868	21.1	51.6	21.1	6.2
	1902	463,982,821	85,700,605	78,735,500	6,965,105	250,526,642	86,825,536	40,930,038	18.5	54.0	18.7	8.8
Percent increase or decrease (−)	1902-32	750.1	2,417.2	2,479.5	1,713.3	149.9	1,105.1	180.1	------	------	------	------
	1927-32	−4.0	9.9	10.3	3.2	−35.1	5.0	−37.3	------	------	------	------
	1922-27	40.2	83.2	86.6	43.3	−8.1	51.8	20.5	------	------	------	------
	1917-22	68.5	103.5	102.8	112.2	43.7	76.3	38.4	------	------	------	------
	1912-17	44.1	74.3	74.4	73.4	24.6	46.7	69.4	------	------	------	------
	1907-12	44.9	72.1	72.6	65.7	36.3	44.5	25.5	------	------	------	------
	1902-07	79.6	104.9	105.3	101.2	71.7	102.4	26.0	------	------	------	------

For footnotes, see p. 7.

TABLE 1.—SUMMARY, BY INDUSTRIES: 1902 TO 1932—Continued

ITEM AND CENSUS YEAR	Total	CENTRAL ELECTRIC LIGHT AND POWER ESTABLISHMENTS			Electric railways [1]	Telephones [2]	Telegraphs [3] (land and ocean)	PERCENT OF TOTAL			
		Total	Commercial	Municipal				Electric light and power	Electric railways	Telephones	Telegraphs
Expenses 1932	$2,201,884,829	[14] $1,566,356,044	[14] $1,477,139,498	[14] $89,216,546	$635,528,785	(6)	(6)	71.1	28.9		
1927	2,371,739,710	[14] 1,318,255,150	[14] 1,318,255,150	(6)	894,331,316	(6)	$159,153,244				
1922	2,523,370,338	859,625,091	792,496,243	67,128,848	975,594,667	$560,159,965	127,990,615	34.1	38.7	22.2	5.1
1917	1,480,337,159	426,568,307	395,127,395	31,440,912	648,794,633	313,103,060	91,871,159	28.8	43.8	21.2	6.2
1912	994,260,352	234,577,277	217,660,112	16,917,165	498,736,479	202,567,644	58,378,952	23.6	50.2	20.4	5.9
1907	671,970,758	134,196,911	123,880,291	10,316,620	361,369,019	134,525,215	41,879,613	20.0	53.8	20.0	6.2
1902	367,362,899	68,081,375	62,835,388	5,245,987	203,168,719	65,164,771	30,948,034	18.5	55.3	17.7	8.4
Percent increase or decrease (—) 1902–32	499.4	2,200.7	2,250.8	1,600.7	212.8	(6)	(6)				
1927–32	—7.2	18.8	12.1	(15)	—28.9	(6)	(6)				
1922–27	—6.0	53.4	66.3	(15)	—8.3	(15)	24.3				
1917–22	70.5	101.5	100.6	113.5	50.4	78.9	39.3				
1912–17	48.9	81.8	81.5	85.9	30.1	54.6	57.4				
1907–12	48.0	74.8	75.7	64.0	38.0	50.6	39.4				
1902–07	82.9	97.1	97.2	96.7	77.9	106.4	35.3				
Net income 1932	566,214,870	[16] 575,671,404	[16] 538,616,057	[16] 37,055,347	[17] *9,456,534*		(6)				
1927	600,209,874	[16] 505,787,025	[16] 505,787,025		70,578,395		23,844,454				
1922	407,232,227	212,494,792	194,188,030	18,306,762	74,206,021	96,663,943	23,867,471	52.2	18.2	23.7	5.9
1917	259,327,000	100,325,933	91,506,626	8,819,307	81,770,058	59,398,740	17,832,269	38.7	31.5	22.9	6.9
1912	213,061,221	67,696,121	61,394,297	6,301,824	87,654,884	51,326,325	6,383,891	31.8	41.1	24.1	3.0
1907	161,162,464	41,445,427	37,750,048	3,695,379	68,787,551	41,225,231	9,704,255	25.7	42.7	25.6	6.0
1902	96,619,922	17,619,230	15,900,112	1,719,118	47,357,923	21,660,765	9,982,004	18.2	49.0	22.4	10.3
Percent increase or decrease (—) 1902–32	486.0	3,167.3	3,287.5	2,055.5	(17)		(6)				
1927–32	—5.7	13.8	6.5		(17)		(6)				
1922–27	(15)	(15)	160.5	(15)	—4.9	(15)	—0.1				
1917–22	57.0	111.8	112.2	107.6	—9.3	62.7	33.8				
1912–17	21.7	48.2	49.0	39.9	—6.7	15.7	179.3				
1907–12	32.2	63.3	62.6	70.5	27.4	24.5	—34.2				
1902–07	66.8	135.2	137.4	115.0	45.3	90.3	—2.8				

[1] Figures for 1922 and 1927 not strictly comparable with those for other years due to inclusion for these years and the exclusion for other years of a small amount of data for motor-bus lines operated directly by electric railways.

[2] Excludes systems reporting annual incomes of less than $10,000 for 1932, 1927, and 1922 and those reporting less than $5,000 for 1917, 1912, and 1907, but includes for 1902 some systems reporting incomes less than $5,000. The total numbers of systems and lines reported at the several censuses were as follows: 1932, 44,828; 1927, 60,148; 1922, 57,253; 1917, 53,234; 1912, 32,233; 1907, 22,971; 1902, 9,136.

[3] Includes Commercial Cable Co. of Cuba for 1927, 1922, 1917, 1912, and 1907; not reported for 1902. Does not include railway telegraph or wireless systems.

[4] Includes messengers.

[5] Exclusive of 7,516 messengers.

[6] Not called for on schedule.

[7] For 1912, the compensation of telegraph messengers is not included in "Salaries and wages", but is included in total expenses.

[8] Reported as "Fixed capital" for electric light and power establishments for 1932.

[9] Capitalization: Includes cash investments reported for unincorporated companies, and by roads and systems owned by municipalities or by individuals.

[10] Includes $902,057,279, value of plant and equipment owned by companies engaged in the operation of electric light and power plants and of other public utilities, not distributed among the several utilities.

[11] Includes electric service and miscellaneous electric revenues, net income from utilities other than electric, and nonoperating income. Does not include amount of rents credited to income. In addition, income amounting to $10,521,614 for 1932 and $15,477,628 for 1927 was received from sale of current to other public-service corporations and to private establishments and individuals by electric-railway companies.

[12] Operating revenues only.

[13] Includes estimated value of free service. In addition, income from sale of current to other public-service corporations and to private establishments and individuals was reported by electric-railway companies as follows: For 1922, $94,078,216; for 1917, $59,629,985; for 1912, $36,500,030; for 1907, $20,093,302; for 1902, $7,703,574.

[14] Operating expenses, interest, and other deductions from gross income. Does not include amount of rent payments for lease of plants, equipment, etc., nor appropriations from surplus for retirement reserves.

[15] Because of the inclusion of certain data on expenses in the figures for 1922 and earlier years and the omission of such data for 1927, it is impossible to calculate percentages for 1927, comparable with those for earlier years, for expenses and net income. Moreover, the comparability of the percentages for income is affected slightly by the inclusion of data for income other than operating income in the figures for 1922 and earlier years and the exclusion of such data from the 1927 figures for municipal light and power plants and for telephone companies.

[16] In order to have data for 1932 and 1927 comparable with earlier years, the following deductions should be made: For 1932, excess of rents paid over rents received, $10,861,896 and retirement appropriations from surplus, $27,801,362; for 1927, the amount of $54,801,550 comprising excess of rents paid over rents received, amortization of franchises, and appropriations from surplus for depreciation or retirement reserves.

[17] Figures in italics indicate deficit. Percent of decrease not computed for the 1902–32 or the 1927–32 periods.

TABLE 2.—PRIME MOVERS—NUMBER AND HORSEPOWER, BY TYPE, FOR CENTRAL ELECTRIC LIGHT AND POWER ESTABLISHMENTS AND FOR ELECTRIC RAILWAYS: 1912 TO 1932

CLASS OF ESTABLISHMENT AND CENSUS YEAR	TOTAL		STEAM						INTERNAL-COMBUSTION ENGINES		HYDROTURBINES	
			Total		Turbines		Engines					
	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower
Total 1932	11,420	49,497,357	4,320	35,050,479	2,915	34,148,581	1,405	901,898	3,304	884,801	3,796	13,562,077
1927	12,452	37,735,949	5,497	27,299,923	3,008	25,884,761	2,489	1,415,162	3,188	555,988	3,767	9,880,038
1922	14,750	23,970,166	7,704	17,408,880	2,868	15,210,557	4,836	2,198,323	3,303	335,490	3,743	6,225,796
1917	15,905	17,136,947	9,228	11,992,991	2,263	9,070,091	6,965	2,922,900	2,987	238,700	3,690	4,905,256
1912	14,591	11,191,429	10,105	8,115,666	1,496	4,517,196	8,609	3,598,470	1,164	135,225	3,322	2,940,538
Light and power establishments 1932	11,185	47,966,962	4,121	33,553,634	2,822	32,904,158	1,299	649,476	3,298	881,301	3,766	13,532,027
1927	12,030	35,710,128	5,131	25,317,577	2,864	24,323,304	2,267	994,273	3,177	548,288	3,722	9,844,263
1922	13,242	19,850,860	6,505	13,725,847	2,330	12,354,551	4,175	1,371,296	3,256	302,995	3,481	5,822,018
1917	13,795	12,936,755	7,487	8,449,076	1,699	6,747,399	5,788	1,701,677	2,934	210,406	3,374	4,277,273
1912	11,902	7,530,044	7,847	4,949,778	1,034	3,054,396	6,813	1,895,382	1,116	111,035	2,939	2,469,231
Electric railways 1932	235	1,530,395	199	1,496,845	93	1,244,423	106	252,422	6	3,500	30	30,050
1927	422	2,025,821	366	1,982,346	144	1,561,457	222	420,889	11	7,700	45	35,775
1922	1,508	4,119,306	1,199	3,683,033	538	2,856,006	661	827,027	47	32,495	262	403,778
1917	2,110	4,200,192	1,741	3,543,915	564	2,322,692	1,177	1,221,223	53	28,294	316	627,983
1912	2,689	3,661,385	2,258	3,165,888	462	1,462,800	1,796	1,703,088	48	24,190	383	471,307
	PERCENT INCREASE OR DECREASE (−)											
Total 1912–32	−21.7	342.3	−57.2	331.9	94.9	656.0	−83.7	−74.9	183.8	554.3	14.3	361.2
1927–32	−8.3	31.2	−21.4	28.4	−3.1	31.9	−43.6	−36.3	3.6	59.1	0.8	37.3
1922–27	−15.6	57.4	−28.6	56.8	4.9	70.2	−48.5	−35.6	−3.5	65.7	0.6	58.7
1917–22	−7.3	39.9	−16.5	45.2	26.7	67.7	−30.6	−24.8	10.6	40.5	1.4	26.9
1912–17	9.0	53.1	−8.7	47.8	51.3	100.8	−19.1	−18.8	156.6	76.5	11.1	66.8
Light and power establishments 1912–32	−6.0	537.0	−47.5	577.9	172.9	977.3	−80.9	−65.7	195.5	693.7	28.1	448.0
1927–32	−7.0	34.3	−19.7	32.5	−1.5	35.3	−42.7	−34.7	3.8	60.7	1.2	37.5
1922–27	−9.2	79.9	−21.1	84.5	22.9	96.9	−45.7	−27.5	−2.4	81.0	6.9	69.1
1917–22	−4.0	53.4	−13.1	62.5	37.1	83.1	−27.9	−19.4	11.0	44.0	3.2	36.1
1912–17	15.9	71.8	−4.6	70.7	64.3	120.9	−15.0	−10.2	162.9	89.5	14.8	73.2
Electric railways 1912–32	−91.3	−58.2	−91.2	−52.7	−79.9	−14.9	−94.1	−85.2	(1)	−85.5	−92.2	−93.6
1927–32	−44.3	−24.5	−45.6	−24.5	−35.4	−20.3	−52.3	−40.0	(1)	−54.5	(1)	−16.0
1922–27	−72.0	−50.8	−69.5	−46.2	−73.2	−45.3	−66.4	−49.1	(1)	−76.3	−82.8	−91.1
1917–22	−28.5	−1.9	−31.1	3.9	−4.6	23.0	−43.8	−32.3	(1)	14.8	−17.1	−35.7
1912–17	−21.5	14.7	−22.9	11.9	22.1	58.8	−34.5	−28.3	(1)	17.0	−17.5	33.2

[1] Percent not computed where base is less than 100.

TABLE 3.—GENERATORS, KILOWATT CAPACITY, AND CURRENT GENERATED: KILOWATT-HOURS, ELECTRIC LIGHT AND POWER ESTABLISHMENTS AND ELECTRIC RAILWAYS, BY GEOGRAPHIC DIVISIONS: 1932, 1927, AND 1922

DIVISION AND CENSUS YEAR	GENERATORS (RATED KILOWATT CAPACITY)			CURRENT GENERATED (KILOWATT-HOURS)		
	Total	Electric light and power establishments	Electric railways [1]	Total	Electric light and power establishments	Electric railways
United States 1932	35,749,268	34,622,554	1,126,714	82,090,643,065	79,657,466,051	2,433,176,414
1927	27,282,209	25,811,305	1,470,904	77,662,241,303	74,686,378,010	2,975,863,293
1922	17,286,272	14,313,438	2,972,834	46,764,987,136	40,291,536,435	6,473,450,701
New England 1932	2,910,487	2,639,387	271,100	5,655,348,605	5,330,233,841	325,114,764
1927	2,465,430	2,124,315	341,115	5,228,269,056	4,750,193,632	478,075,424
1922	1,789,598	1,456,574	333,024	3,598,451,235	2,969,971,441	628,479,794
Middle Atlantic 1932	8,900,585	8,271,328	629,257	22,156,434,490	20,340,794,839	1,815,639,651
1927	7,074,356	6,373,454	700,902	21,094,636,133	19,281,644,834	1,812,991,299
1922	4,552,869	3,664,986	887,883	12,459,796,668	10,765,515,044	1,694,281,624
East North Central 1932	8,260,178	8,246,758	13,420	18,128,169,595	18,106,043,295	22,126,300
1927	6,324,459	6,245,084	79,375	18,366,146,055	18,211,894,585	154,251,470
1922	3,903,252	3,309,539	593,713	10,781,058,214	9,368,260,227	1,412,797,987
West North Central 1932	2,770,920	2,615,095	155,825	5,545,574,596	5,357,886,862	187,687,734
1927	2,183,721	1,950,096	233,625	4,868,765,906	4,549,263,907	319,501,999
1922	1,497,851	1,171,496	326,355	3,584,644,522	2,968,756,855	615,887,667
South Atlantic 1932	4,312,747	4,290,917	21,830	9,497,938,104	9,458,694,089	39,244,015
1927	3,166,674	3,144,019	22,655	8,486,453,712	8,445,216,788	41,236,924
1922	1,781,260	1,356,478	424,782	4,826,310,894	3,789,434,356	1,036,876,538
East South Central 1932	1,483,604	1,480,254	3,350	2,997,979,160	2,993,770,460	4,208,700
1927	1,082,015	1,049,765	32,250	2,832,442,342	2,777,268,044	55,174,298
1922	656,063	573,738	82,325	1,545,083,914	1,419,833,684	125,250,230
West South Central 1932	1,795,743	1,792,286	3,457	4,309,935,366	4,308,490,556	1,444,810
1927	1,184,580	1,152,073	32,507	3,346,057,716	3,275,021,117	71,036,599
1922	627,851	461,984	165,867	1,493,620,350	1,041,392,651	452,227,699
Mountain 1932	1,185,675	1,157,200	28,475	2,384,542,719	2,346,832,279	37,710,440
1927	1,009,303	980,828	28,475	3,433,146,636	3,389,551,356	43,595,280
1922	706,231	661,376	44,855	2,317,937,714	2,209,444,164	108,493,550
Pacific 1932	4,129,329	4,129,329	----------	11,414,720,430	11,414,720,430	----------
1927	2,791,671	2,791,671	----------	10,006,323,747	10,006,323,747	----------
1922	1,771,297	1,657,267	114,030	6,158,083,625	5,758,928,013	399,155,612

[1] Includes 19 idle generators of 46,389 kilowatt capacity for 1932; 36 idle generators of 31,075 kilowatt capacity for 1927; 71 idle generators of 67,545 kilowatt capacity for 1922.

CENTRAL ELECTRIC LIGHT AND POWER STATIONS: 1932

GENERAL EXPLANATIONS

Definition of establishment.—The term "establishment" as used in this report, signifies a plant or plants operated under single ownership. It may comprise one or more generating stations, together with distributing equipment; or it may comprise generating equipment only where an establishment sells its entire output to other establishments for distribution; or it may consist of concerns which purchase their entire output and distribute it. The number of establishments reported for 1932 was 3,429. Of this number, 1,788 reported generation of energy, while 1,641 reported distribution only. However, there were 4,339 separate generating stations reported for 1932.

The term "all establishments", as used in this report, indicates that the data given included both commercial and municipal establishments.

Character of establishments canvassed.—The statistics in this report relate to all commercial or municipal public-service plants which were engaged during any portion of the calendar year 1932 in the generation and distribution of electric current to public or private consumers for light, power, and heat; or in the generation of current for sale to other light and power establishments for distribution; or in the distribution of current generated by plants under other ownership. Statistics do not include establishments which consume all current generated, such as mines, factories, hotels, and other enterprises not in the nature of public utilities, nor plants operated by the Federal Government or States, unless the energy is sold commercially. No data are included for energy generated in electric-railway plants, unless a part of the current is sold. However, the data include energy sold by central electric light and power stations to street and interurban railways and electrified steam-railroad divisions.

Classification of establishments.—In this report, the light and power establishments are classified in four ways for the purposes of statistical analyses:

(1) *Commercial and municipal.*—Commercial establishments are operated by corporations, firms, or individuals, while municipal establishments are operated by municipalities. In the census for 1927, two different schedules were used, one for commercial establishments and a simplified one, which conformed more nearly with their less elaborate accounting systems for municipal establishments. However, in the census for 1932, the same schedule was sent to both commercial and municipal establishments. The reader should bear in mind, in making any comparison between commercial and municipal establishments, that these two types of establishments operate on a different basis.

(2) *Purely electric and composite.*—Purely electric establishments are those engaged solely in the generation or in the distribution, or in both the generation and the distribution, of electrical energy. Composite establishments, as defined by the Census Bureau, are those that not only generate or distribute electrical energy, but in addition, carry on other industrial activities in connection with electric service, such as the operation of water works, the manufacture of gas or ice, the operation of electric railways, and the like. In many cases, an establishment of this character keeps only one system of accounts, and as a result, it was impossible to obtain exact data for the light and power business separate from the other operations. Where the nonelectric business was merely incidental to the operation of the light and power plant, the report was accepted, with or without data covering the separate activities, in accordance with the system of accounting employed by the reporting company. Where the nonelectric business was of considerable importance, careful estimates were obtained, if possible, in order that the data might relate only to the operations of the light and power plant; but in a few cases of this kind it was found impracticable to make a satisfactory segregation of the data for the electrical business, and in such cases the returns necessarily covered all the activities of the establishments reporting.

(3) *Generating and purchasing.*—Generating establishments are those which produce all or any part (even though a minor part) of their output in their own generating stations. Purchasing establishments are those which purchased all the current distributed by them during the census year, even though they may have maintained generating equipment not in use. The investment is normally much smaller in proportion to the amount of business done, for the latter class than the former, and the statistics are, in general, much less complex.

(4) *Hydroelectric and other.*—No attempt has been made in this report to make an arbitrary classification of hydroelectric and fuel-burning establishments.

However, in chapter III, in view of the fact that a large part of the industry's water-power development is found in establishments operating both hydroelectric and fuel-burning plants, with widely varying ratios of rated power, statistics are presented in several groupings. These groupings are used in order to make possible a variety of comparisons, both between the groups and with previously-published statistics, and therefore in some instances, they overlap.

State statistics.—Statistics for prime movers, generators, fuel consumption, energy output, and disposal of energy (customers served, current sold, and revenue for electric service) are presented separately by geographic divisions and States. Data for transmission systems are given for geographic divisions only. Due to the fact that the accounting systems of many companies operating in more than one State do not segregate accounts by States, the schedule for 1932 did not require separate State data for certain inquiries, namely, the condensed balance sheet; consolidated income, operating-revenue, and expense statement which included salaries and wages; and number of employees.

Area and period covered.—The census of electric light and power plants covered the 48 States and the District of Columbia, no canvass of the outlying possessions having been made. The statistics compiled from the returns of the census relate, as a rule, to the calendar year 1932. In some cases, however, returns were accepted for the fiscal year, when it did not seem practicable to obtain accurate figures otherwise. Data also have been included for establishments which were in operation during periods of less than 12 months, namely (1) new plants, or successors to old plants which began operations at some time within the calendar year; (2) plants which suspended operations during a part of the year for various reasons; (3) those which passed out of existence within the year; and (4) those which were succeeded by other plants within the year.

Balance-sheet data relate to December 31, 1932 (or to the last day of the business year covered by the report of each establishment). The number of employees was reported as of June 30, 1932.

Earlier censuses.—The census of electric light and power stations has been taken at quinquennial intervals beginning with 1902. Prior to that year, however, two part canvasses of the industry had been made. The first, which was made in connection with the census of manufactures in 1890, covered only the State of New York and the city of St. Louis. At the second, which was made by the Commissioner of Labor in 1898, returns were obtained from 320 of the 460 known municipal plants and 632 of the 2,572 commercial plants then in existence. The schedules used at the seven quinquennial canvasses were similar in general scope, but numerous changes in detail have been made from census to census. The most important revisions appeared in the schedule for 1927, which called for more detailed classification of prime movers, of generators, and transmission lines; a more detailed allocation of the energy output among the various classes of consumers; a classification by source; and the addition of statistics on fuel consumption. Data on substations were omitted. For the 1927 census, 2 schedules were used, 1 for commercial and 1 for municipal. The schedule used for 1932 followed the 1927 commercial schedule quite closely. The generator inquiry excluded many of the detailed data introduced in the 1927 schedule, such as type of current used, whether alternating or direct, and data for frequency groups; the income, operating-revenue, and expense statement was revised to give a more complete breakdown of "Electric activities" and "All other"; the inquiry on transmission lines was revised to include more detailed information as to type, whether overhead (pole line or steel tower) or underground, also to include individual voltage rather than voltage groups.

Light, heat, and power.—Since, in the cases of many customers using current for light, for heat, and power, only one meter is used for measuring the consumption, it is impossible to show a complete distribution of current consumed in these two classes of service. Domestic service, while consisting largely of lighting, also includes the operation of small appliances in which current is used for heat or power.

Commercial service is divided into two classes, "Small light and power (retail)" and "Large light and power (wholesale)." On the whole, lighting predominates in the former, whereas it accounts for but a small percentage of the energy consumed under the latter. Energy sales at wholesale to ultimate consumers are almost invariably made for industrial purposes, such as the operation of mills and factories.

Free service.—In earlier censuses, an estimated value was put on free service rendered by establishments in supplying energy for lighting streets, parks, and public buildings. In the reports for both 1927 and 1932, the amount of energy used for free service was stated, but no value had been assigned to it.

CHAPTER I.—THE INDUSTRY AS A WHOLE

This chapter presents detailed statistics for the industry as a whole, covering data for physical equipment—prime movers, generators and transmission lines; yearly consumption of current; allocation of sales and revenue by customer groups; consolidated balance sheet; and a consolidated income, operating-revenue, and expense statement. The term "All establishments" includes statistics reported by both commercial and municipal establishments. On account of lack of space, it has been necessary to exclude many of the data for the earlier years, confining the summaries to statistics for 1932, 1927, and 1922. Comparative data for earlier years can be found in the final report for 1927.

Summarization of the industry.—The electric light and power industry has increased in magnitude in the 10-year period, 1922–32. This is shown in the increase of mechanization and in the size of both the individual plant and of the generating units. The rated capacity of prime movers, as reported for 1932, is more than twice as great as for 1922. However, the number of units decreased 15.5 percent. The number of establishments shows a decided decrease in the 10-year period, especially those establishments which generated all or a part of their energy (as distinguished from those operating entirely on purchased energy). The group generating all or a part of its energy decreased from 4,389 to 1,788.

Table 4 gives summary statistics for the industry, while table 5 gives data for purely electric and composite establishments, and table 6 presents data by character of ownership.

Establishments classified as purely electric and composite (table 5).—The total revenue for purely electric establishments shows an increase of 38.7 percent in the 10-year period, while revenue for composite establishments shows an increase of 165.1 percent. Revenue from electric service for "purely electric" shows an increase of 38.3 percent in this period, while revenue from other sources shows an increase of 47.9 percent; revenue from electric service as reported by composite establishments shows an increase of 150.4 percent, while revenue from other sources shows an increase of 438.8 percent. Generated output of purely electric establishments increased 44.2 percent in the period from 1922 to 1932, while energy reported as generated by composite establishments increased 164.3 percent.

Commercial establishments classified according to character of ownership (table 6).—The decrease in the number of establishments operating under individual and firm ownership in the 10-year period is an outstanding fact. In 1922, there were 1,021 of these establishments, or more than one-quarter the total number of commercial establishments. Data for 1932 show only 202 such establishments, or a decrease of over 80 percent. The 1,425 corporation-owned establishments were so much greater in average size that they reported over 99.9 percent of the current generated by commercial plants.

Prime movers (table 7).—Steam turbines have become the most important prime movers in regard to horsepower capacity, although outnumbered by both hydroturbines, which come next in horsepower, and by internal-combustion engines, which contribute only 1.8 percent of the total horsepower. The horsepower of steam engines amounted to 1.4 percent of the total horsepower. Of the total rating of steam turbines, over two thirds is in units of 20,000 horsepower and over, while of the total for hydroturbines, about 43.8 percent is found in the group 20,000 horsepower and over. Rated horsepower of all types of prime movers, with the exception of steam engines, has increased in the 5-year period.

Prime movers directly connected.—In earlier censuses, the number of generators exceeded the number of prime movers, due to the practice of driving several generators by belts and shafting from one steam engine or water wheel. However, in later census periods, the practice of direct connection of prime movers to generators was more prevalent, and the number of prime movers reported at a census has been nearly the same as the number of generators (table 9).

Fuel consumption per kilowatt-hour.—The increase in operating efficiency resulting in a greatly increased output of electric energy per pound of fuel consumed, is brought out in table 8. The 1932 statistics show that the average

consumption of coal or its equivalent per kilowatt-hour of current generated was 1.47 pounds, as compared with 1.84 pounds for 1927. Bituminous coal is by far the leading fuel used, representing 76.7 percent of the total equivalent fuel. Natural gas is second, reporting 12.4 percent of the total. However, it is interesting to note that the amount of bituminous coal reported decreased over 27.1 percent in the 5-year period, while natural gas increased 62.3 percent.

Current generated and current obtained from other sources outside the industry (tables 10, 13, and 16).—In addition to the energy generated in electric light and power plants, the industry obtained a certain amount of energy from outside sources, by purchase, so that of the total amount of energy generated (81,543,267,321 kilowatt-hours), 97.7 percent is generated within the industry and 2.3 percent is obtained from other sources. Most of the latter amount is purchased by commercial establishments from manufacturing plants and other sources outside the electric light and power industry. (There were 554,888,576 kilowatt-hours purchased from systems in Canada).

In comparing tables 10 and 13, it is noted that the output given in the latter table amounts to 111,715,765,636 kilowatt-hours, while the total shown in table 10 is 81,543,267,321 kilowatt-hours. This is due to the fact that a very considerable amount of current is purchased from establishments within the industry, in part by plants that have no generating equipment, but purchased all their energy at wholesale for retail distribution to other consumers, and in part by those having generating equipment but finding it expedient from time to time to add to their own production. The amount of energy thus purchased by establishments within the industry has increased greatly between the last two census periods. Economically, it reflects a more efficient utilization of both water and steam power plants—of the former, by transmitting to a distance the energy which could not be utilized in the local market at times of abundant stream flow, and, of the latter, by making full use of the most efficient steam plants within a large area and transmitting energy from them at periods of deficient water power in the territory normally served by hydro plants. Physically it has been made possible by the extensive construction of high-tension transmission lines and the installation of large, economically operated power stations advantageously situated as to fuel supply and water.

The result is that, in addition to more than 79,000,000,000 kilowatt-hours generated within the industry, another 32,000,000,000 kilowatt-hours (table 16) is to be accounted for in arriving at the grand total of which disposal is made, constituted as follows: Sales to ultimate consumer; sales at wholesale to other domestic light and power establishments for resale; energy used by companies themselves for their own operations; energy sent out of State in which generated, not reported as sold; energy exchanged, not reported as sold; free service, and finally, the inevitable transmission, distribution, and conversion losses. This additional 32,000,000,000 kilowatt-hours includes somewhat less than 2,000,000,000 kilowatt-hours representing purchases from manufacturing plants and other sources outside the light and power industry in the United States, and from the public-utility electric systems in Canada. The remainder is duplication, representing purchases for sale within the industry.

Transmission systems (table 17).—Due to the fact that the 1932 schedule called for more detailed information than the schedule of 1927, with individual voltages rather than voltage groups, and type of system, whether overhead (pole line or steel tower), or underground, it is impossible to present comparative data, except the total number of miles of circuit. This amounted to 251,408 miles of circuit reported by commercial establishments for 1932, as compared with 185,449 for 1927, or an increase of 35.6 percent. In addition, municipal establishments reported 571 miles of circuit for 1932.

Reduction in transmission losses (table 4).—The growing concentration of power-producing equipment in large plants, some of them at a distance from centers of consumption, and the increasing interchange of energy between systems made possible by interconnections, reflected in the large total of energy purchased for resale, might be expected to lead to an increase in transmission and distribution losses. However, the contrary is the fact. In 1922, losses in transmission, etc., constituted 14.2 percent of the total amount of energy for disposal; for 1927, 12.9 percent; and for 1932, 12.3 percent.

Sales to ultimate consumers (table 11).—The census for 1927 was the first year to show detailed statistics by class of service. In this report, sales are given for farm service (all uses), domestic service, small light and power (retail), large light and power (wholesale), municipal street lighting, street and interurban

railways, electrified-steam railroads, and other service. The 1927 report carried an item "Undistributed by class of service", due to the fact that many companies did not separate their accounts by type of service. The 1932 report made a complete distribution by type of service, although it was necessary, in a few cases, to accept estimates from the reporting company. While no comparative data are published in this report, for 1927 and 1932, the reader should bear in mind that a considerable part of the "undistributed" item as published in the 1927 volume was domestic service and "small light and power."

Energy consumption by class of service (table 11).—While domestic service shows 80.8 percent of the total number of customers, 17.9 percent of total kilowatt-hours sold, and 35.7 percent of the total revenue from electric service; large light and power (wholesale) represents 1.6 percent of the total number of customers, 49.1 percent of the total kilowatt-hours sold, and 26.5 percent of the revenue from electric service; small light and power (retail) represents 14.8 percent of total number of customers, 18.3 percent of total kilowatt-hours sold, and 27 percent of the revenue from electric service.

Sales for resale (table 12).—Of the 22,369,097,291 kilowatt-hours reported as sold for resale, 60.2 percent was sold to other electric companies in the same State, 33.8 percent sold at State line, and the remainder, 6 percent, to municipalities in the same State.

The balance sheet (table 14).—The schedule for 1932 called for a balance sheet as of December 31. The existence of numerous composite establishments, that is, those rendering public-utility service other than sale of electrical energy, makes it difficult to determine accurately the investment in the electric light and power industry.

Of all establishments reporting, 27.2 percent are composite, with an average fixed capital of $9,260,753, and they reported 63.8 percent of the total revenue from electric service. Electric establishments have an average fixed capital of $1,618,341 and reported 36.2 percent of total revenue.

In many cases the allocation of the capital to the several kinds of utilities is impracticable, if not impossible. Therefore, the schedule called for separate figures on fixed capital (estimated, if necessary), used for supplying electrical energy, and on the value of that used for other purposes, such as gas, electric railways, etc. In other respects, the balance sheet was made to relate to the company as a whole, covering all of the reporting companies' activities. The average value of total fixed capital is $433 per kilowatt, while the average for electric light and power plants is $366. These values are based on the total of 34,622,554 kilowatts of generator capacity reported for commercial and municipal establishments. The aggregate capitalization of commercial establishments is 5.3 percent less than the value of their plant and equipment.

Consolidated income, operating-revenue, and expense statement.—Table 15 gives detailed statistics on income, operating revenue, and expenses for electric light and power and all other utilities, with combined totals. The revenue from the sale of utility service differs from that received from ultimate consumers only (table 42) by the revenue received from other electric light and power establishments for energy purchased for resale. Of the total operating revenues, electric light and power represents 83.2 percent, while other utilities, 16.8 percent. Operating expenses of electric light and power plants amount to $803,100,258, and include cost of fuel, which represents 14 percent of total; purchased power, 22.3 percent; maintenance expense, 10.9 percent; and salaries and wages, 40.3 percent. The salaries and wages shown are those chargeable to operating expenses. Amounts paid to regular employees who are engaged part of the time in construction work, or maintenance, are not chargeable to labor, but are included in the maintenance expense. Of the total operating revenues for electric light and power establishments, 93.9 percent is reported by commercial establishments and 6.1 percent by municipal. The schedule for 1932 did not require separation of electric light and power data from those of other utilities on the following items—nonoperating income, interest and amortization of debt discount and expense, other deductions from income, and net income. Therefore, the data published include not only electric light and power, but the reporting companies' entire operations.

Energy crossing State lines (table 16).—Of the total amount of energy for disposal (111,715,765,636 kilowatt-hours), 71.3 percent was reported as generated by the industry; 16.6 percent purchased from other electric companies in the same State; 5.7 percent purchased from other electric companies in other States; 0.5 percent imported from Canada; 1.2 percent purchased from other sources (electric railways, manufacturing plants, etc.); and 4.7 percent received from plants of the same system, both in same State and in other States.

TABLE 4.—SUMMARY FOR ELECTRIC LIGHT AND POWER STATIONS, ALL ESTABLISHMENTS: 1932, 1927, AND 1922

ITEM	1932	1927	1922
Number of reporting establishments, total	3,429	4,335	6,355
Generating all or part of current	1,788	2,331	4,389
Purchasing all current	1,641	2,004	1,966
Number of separate generating stations, total	[1] 4,339	4,801	5,444
Prime movers:			
Total number	11,185	12,030	13,242
Total horsepower	47,966,962	35,710,128	19,850,860
Steam turbines:			
Number	2,822	2,864	2,330
Horsepower	32,904,158	24,323,304	12,354,551
Steam engines:			
Number	1,299	2,267	4,175
Horsepower	649,476	994,273	1,371,296
Internal-combustion engines:			
Number	3,298	3,177	3,256
Horsepower	881,301	548,288	302,995
Hydroturbines:			
Number	3,766	3,722	3,481
Horsepower	13,532,027	9,844,263	5,822,018
Generators, by type of prime mover:			
Total number	11,111	11,967	12,701
Total kilowatt capacity (rated)	34,622,554	25,811,305	14,313,438
Steam turbines:			
Number	2,829	2,886	
Kilowatt capacity	24,032,842	17,848,124	
Steam engines:			
Number	1,291	2,294	9,559
Kilowatt capacity	452,582	697,136	9,962,781
Internal-combustion engines:			
Number	3,274	3,189	
Kilowatt capacity	597,628	416,533	
Hydroturbines:			
Number	3,717	3,598	3,142
Kilowatt capacity	9,539,502	6,849,512	4,350,657
Output,[2] kilowatt-hours, total	111,715,765,636	96,828,633,719	50,274,212,592
Reported as generated, total	79,657,466,651	74,686,378,010	40,291,536,435
By steam	45,374,873,980	45,391,190,914	(3)
By internal-combustion	715,142,922	577,048,687	(3)
By water	33,567,449,749	28,718,138,409	(3)
Reported as received from other sources	32,058,298,985	22,142,255,709	9,982,676,15
Number of customers, total	23,861,642	21,790,238	12,709,868
Ultimate consumers	23,858,411	21,786,317	(3)
Resale	3,231	3,921	(3)
Revenue from electric service, total	$1,975,303,955	$1,802,655,493	[4] $1,020,439,038
Ultimate consumers	$1,821,105,524	$1,667,045,571	$945,428,069
Resale	$154,198,431	$135,609,922	$75,010,969
Kilowatt-hours sold, total	88,265,073,126	79,011,210,518	41,964,785,034
Ultimate consumers	65,895,975,835	63,612,481,088	32,947,716,350
Resale	22,369,097,291	15,398,729,430	9,017,068,684
Kilowatt-hours distributed for other purposes (nonrevenue):			
Free service	379,421,146	509,287,430	1,174,660,764
Energy used by reporting establishments	1,466,474,092	1,860,108,110	
Energy sent out of State in which generated, not reported as sold	4,962,049,578	2,972,126,075	(3)
Energy exchanged, not reported as sold [5]	2,950,682,249	----------	----------
Energy lost in transmission, distribution, conversion, etc.	13,692,065,445	12,475,901,586	7,134,766,794
Percent loss (based on total output)	12.3	12.9	14.2
Employees	244,573	251,020	150,762
Salaries and wages	$323,880,386	[6] $367,631,756	$212,432,655
Operating expenses (includes cost of fuel, purchased power, salaries and wages, and maintenance)	$803,100,258	[6] $750,483,581	$553,067,982
Fixed capital (plant and equipment, real estate, etc.)	$12,664,376,952	[7] $9,297,458,356	$4,465,015,691
Fuel consumed for electric generation:			
Anthracite, tons (2,240 pounds)	1,392,040	1,787,693	1,638,444
Bituminous coal, tons (2,000 pounds)	25,998,430	35,681,314	24,492,421
Coke, tons (2,000 pounds)	152,841	31,623	36,699
Fuel oil or gasoline, barrels (42 gallons)	7,867,985	7,145,798	11,855,969
Gas, manufactured (1,000 cubic feet)	1,936,336	6,160,753	20,174,385
Gas, natural (1,000 cubic feet)	96,365,126	59,362,039	

[1] Includes 1,330 stations operated by steam; 1,287 by internal-combustion; 1,469 by water; and 253 composite.

[2] Includes generated output and energy received from other sources. Since the energy "Received from other sources" was, in a large part, purchased from other electric light and power companies, a considerable duplication is involved, as such energy would also be included in the "generated".

[3] Not called for on schedule.

[4] Includes "Estimated value of free service".

[5] Data incomplete, since item was not called for on schedule; however, many establishments reported this item separately.

[6] Reported by commercial establishments only. No data for municipal establishments.

[7] Includes $902,057,279 value of plant and equipment owned by companies engaged in the operation of electric light and power plants and of other public utilities, not distributed among the several utilities.

TABLE 5.—SUMMARY, BY PURELY ELECTRIC AND COMPOSITE ESTABLISHMENTS, COMMERCIAL AND MUNICIPAL: 1932, 1927, AND 1922

ITEM AND CENSUS YEAR	Total	PURELY ELECTRIC			COMPOSITE		
		Total	Commercial	Municipal	Total	Commercial	Municipal
Number of establishments 1932	3,429	2,498	1,088	1,410	931	539	392
1927	4,335	2,674	1,426	1,248	1,661	711	950
1922	6,355	3,991	2,582	1,409	2,364	1,192	1,172
Percent increase or decrease (−) 1927-32	−20.9	−6.6	−23.7	13.0	−43.9	−24.2	−58.7
1922-27	−31.8	−33.0	−44.8	−11.4	−29.7	−40.4	−18.9
Fixed capital [1] 1932	$12,664,376,952	$4,042,616,113	$3,597,521,268	$445,094,845	$8,621,760,839	$8,527,286,157	$94,474,682
1927	[2]$11,003,993,330	$2,944,924,348	$2,681,435,195	$263,489,153	$8,059,068,982	$7,905,391,278	$153,677,704
1922	$4,465,015,691	$2,167,746,843	$2,031,410,906	$136,335,937	$2,297,268,848	$2,197,945,117	$99,323,731
Percent increase or decrease (−) 1927-32	15.1	37.3	34.2	68.9	7.0	7.9	−38.5
1922-27	146.4	35.9	32.0	93.3	250.8	259.7	54.7
Revenues:							
Electric service 1932	$1,975,303,955	$714,960,170	$619,777,223	$95,182,947	$1,260,343,785	$1,234,332,286	$26,011,499
1927	$1,802,655,493	$644,006,769	$570,628,811	$73,377,958	$1,158,648,724	$1,109,589,853	$49,058,871
1922	[3]$1,020,439,038	$517,120,938	$472,316,311	$44,804,627	$503,318,100	$464,535,368	$38,782,732
Percent increase or decrease (−) 1927-32	9.6	11.0	8.6	29.7	8.8	11.2	−47.0
1922-27	76.7	24.5	20.8	63.8	130.2	138.9	26.5
All other sources 1932	[4]$181,991,534	$36,508,618	$35,013,639	$1,494,979	$145,482,916	$141,873,904	$3,609,012
1927	[4]$161,008,831	$26,132,878	$26,132,878	(5)	$134,875,953	$134,875,953	(5)
1922	$51,680,845	$24,681,054	$23,566,314	$1,114,740	$26,999,791	$26,266,280	$733,511
Percent increase or decrease (−) 1927-32	13.0	39.7	34.0	----------	7.9	5.2	----------
1922-27	211.5	5.9	10.9	----------	399.5	413.5	----------
Expenses, total 1932	[6]$1,566,356,044	$559,511,383	$489,561,984	$69,949,399	$1,006,844,661	$987,577,514	$19,267,147
1927	[6]$1,318,255,150	$434,446,757	$434,446,757	(5)	$883,808,393	$883,808,393	(5)
1922	$859,625,091	$438,753,977	$402,038,620	$36,715,357	$420,871,114	$390,457,623	$30,413,491
Percent increase or decrease (−) 1927-32	18.8	28.8	12.7	----------	13.9	11.7	----------
1922-27	53.4	−1.0	8.1	----------	110.0	126.4	----------
Employees 1932	244,573	95,805	80,817	14,988	148,768	144,740	4,028
1927	251,020	89,136	80,383	8,753	161,884	154,364	7,520
1922	150,762	77,141	69,436	7,705	73,621	66,669	6,952
Percent increase or decrease (−) 1927-32	−2.6	7.5	0.5	71.2	−8.1	−6.2	−46.4
1922-27	66.5	15.5	15.8	13.6	119.9	131.5	8.2
Prime movers:							
Number 1932	11,185	4,161	2,369	1,792	7,024	6,257	767
1927	12,030	3,940	2,786	1,154	8,090	6,361	1,729
1922	13,242	6,453	4,837	1,616	6,789	4,710	2,079
Percent increase or decrease (−) 1927-32	−7.0	5.6	−15.0	55.3	−13.2	−1.6	−55.6
1922-27	−9.2	−38.9	−42.4	−28.6	19.2	35.1	−16.8
Horsepower 1932	47,966,962	17,948,187	15,782,703	2,165,484	30,018,775	29,408,610	610,165
1927	35,710,128	13,942,477	12,785,127	1,157,350	21,767,651	20,876,279	891,372
1922	19,850,860	10,594,592	9,843,457	751,135	9,256,268	8,727,275	528,993
Percent increase or decrease (−) 1927-32	34.3	28.7	23.4	87.1	37.9	40.9	−31.5
1922-27	79.9	31.6	29.9	54.1	135.2	139.2	68.5

Kilowatt capacity of generators (rated)	1932	34, 622, 554	12, 834, 339	11, 289, 179	1, 545, 060	21, 788, 315	21, 358, 399	429, 916
	1927	25, 811, 305	9, 924, 729	9, 117, 859	806, 870	15, 886, 576	15, 265, 421	621, 155
	1922	14, 313, 438	7, 528, 254	6, 993, 857	534, 397	6, 785, 184	6, 413, 184	372, 000
Percent increase or decrease (−)	1927–32	34. 1	29. 3	23. 8	91. 5	37. 1	39. 9	−30. 8
	1922–27	80. 3	31. 8	30. 4	51. 0	134. 1	138. 0	67. 0
Output, kilowatt-hours:								
Generated	1932	79, 657, 466, 651	32, 196, 519, 757	28, 838, 719, 157	3, 357, 800, 600	47, 460, 946, 894	46, 853, 948, 908	606, 997, 986
	1927	74, 686, 378, 010	30, 767, 411, 540	28, 570, 171, 633	2, 197, 239, 907	43, 918, 966, 470	42, 736, 667, 905	1, 182, 298, 565
	1922	40, 291, 536, 435	22, 332, 308, 933	21, 107, 265, 655	1, 225, 043, 278	17, 959, 227, 502	17, 305, 974, 508	653, 252, 994
Percent increase or decrease (−)	1927–32	6. 7	4. 6	0. 9	52. 8	8. 1	9. 6	−48. 7
	1922–27	85. 4	37. 8	35. 4	79. 4	144. 5	146. 9	81. 0
Energy received from other sources	1932	32, 058, 298, 985	12, 429, 884, 407	11, 243, 446, 422	1, 186, 437, 985	19, 628, 414, 578	19, 392, 289, 977	236, 124, 601
	1927	22, 142, 255, 709	7, 314, 835, 501	6, 537, 026, 323	777, 809, 178	14, 827, 420, 208	14, 454, 896, 745	372, 523, 463
	1922	9, 982, 676, 157	5, 583, 241, 041	5, 249, 781, 513	333, 459, 528	4, 399, 435, 116	4, 170, 014, 941	229, 420, 175
Percent increase or decrease (−)	1927–32	44. 8	69. 9	72. 0	52. 5	32. 4	34. 2	−36. 6
	1922–27	121. 8	31. 0	24. 5	133. 3	237. 0	246. 6	62. 4
Number of customers [7]	1932	23, 861, 642	8, 339, 041	6, 609, 433	1, 729, 608	15, 522, 601	15, 024, 169	498, 432
	1927	21, 790, 238	7, 657, 008	6, 489, 704	1, 167, 304	14, 133, 230	13, 171, 666	961, 564
	1922	12, 709, 868	5, 918, 496	5, 007, 825	910, 671	6, 791, 372	6, 057, 299	734, 073
Percent increase or decrease (−)	1927–32	9. 5	8. 9	1. 8	48. 2	9. 8	14. 1	−48. 2
	1922–27	71. 4	29. 4	29. 6	28. 2	108. 1	117. 5	31. 0

[1] Plant and equipment, real estate, etc.
[2] Comprise: Electric light and power property, $8,395,401,077; railways, $482,323,869; gas, $917,448,140; other, $306,762,965; and property undistributed among the several utilities, $902,057,279. Data for 1932 and 1922 cover electric light and power property only.
[3] Includes "Estimated value of free service."
[4] Miscellaneous electric revenues, net income from utilities other than electric, and nonoperating income. Does not include amount of rents credited to income.
[5] Not called for on schedule, except for municipal plants in cities of 25,000 inhabitants or more.
[6] Operating expenses, interest, and other deductions from gross income. Does not include amount of rent payments for lease of plant, equipment, etc., nor appropriations from surplus for retirement reserves.
[7] Includes ultimate consumers and those purchasing energy for resale.

TABLE 6.—SUMMARY, BY CHARACTER OF OWNERSHIP, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1932, 1927, AND 1922

ITEM AND CENSUS YEAR	Total	COMMERCIAL			Municipal
		Incorporated	Individual	Firm	
Number of establishments 1932	3,429	1,425	148	54	1,802
1927	4,335	1,810	241	86	2,198
1922	6,355	2,753	707	314	2,581
Percent increase or decrease (−) 1927–32	−20.9	−21.3	−38.6	−37.2	−18.0
1922–27	−31.8	−34.3	−65.9	−72.6	−14.8
Fixed capital [1] 1932	$12,664,376,952	$12,119,829,637	$2,756,739	$2,221,049	$539,569,527
1927	[2] $9,297,458,356	(3)	(3)	(3)	$417,166,857
1922	$4,465,015,691	(3)	(3)	(3)	$235,659,668
Percent increase or decrease (−) 1927–32	36.2	(3)	(3)	(3)	29.3
1922–27	108.2	(3)	(3)	(3)	77.0
Revenues: Electric service 1932	$1,975,303,955	$1,852,552,567	$1,067,319	$489,623	$121,194,446
1927	$1,802,655,493	$1,677,373,020	$1,831,263	$1,014,381	$122,436,829
1922	[4] $1,020,439,038	$929,793,067	$4,531,293	$2,527,379	$83,587,359
Percent increase or decrease (−) 1927–32	9.6	10.4	−41.7	−51.7	−1.0
1922–27	76.7	80.4	−59.6	−59.9	46.5
All other sources 1932	[5] $181,991,534	$176,851,918	$23,199	$12,426	$5,103,991
1927	[6] $161,008,831	$160,809,075	$180,261	$19,495	(5)
1922	$51,680,845	$49,550,541	$228,015	$54,038	$1,848,251
Percent increase or decrease (−) 1927–32	13.0	10.0	−87.1	−36.3	(5)
1922–27	211.5	224.5	−20.9	−63.9	(5)
Expenses, total 1932	[7] $1,566,356,044	$1,475,843,648	$884,294	$411,556	$89,216,546
1927	[7] $1,318,255,150	$1,316,069,465	$1,449,742	$735,943	(5)
1922	$859,625,091	$786,459,921	$3,921,064	$2,115,258	$67,128,848
Percent increase or decrease (−) 1927–32	18.8	12.1	−39.0	−44.1	(5)
1922–27	53.4	67.3	−63.0	−65.2	(5)
Employees 1932	244,573	225,169	252	136	19,016
1927	251,020	234,230	327	190	16,273
1922	150,762	133,886	1,589	630	14,657
Percent increase or decrease (−) 1927–32	−2.6	−3.9	−22.9	−28.4	16.9
1922–27	66.5	74.9	−79.4	−69.8	11.0
Prime movers: Number 1932	11,185	8,378	188	60	2,559
1927	12,030	8,733	289	125	2,883
1922	13,242	8,133	964	450	3,695
Percent increase or decrease (−) 1927–32	−7.0	−4.1	−34.9	−52.0	−11.2
1922–27	−9.2	7.4	−70.0	−72.2	−22.0
Horsepower 1932	47,966,962	45,165,400	17,246	8,667	2,775,649
1927	35,710,128	33,620,731	22,536	18,139	2,048,722
1922	19,850,860	18,460,515	68,674	41,543	1,280,128
Percent increase or decrease (−) 1927–32	34.3	34.3	−23.5	−52.2	35.5
1922–27	79.9	82.1	−67.2	−56.3	60.0

See footnotes at end of table.

TABLE 6.—SUMMARY, BY CHARACTER OF OWNERSHIP, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1932, 1927, AND 1922—Continued

ITEM AND CENSUS YEAR	Total	COMMERCIAL			Municipal
		Incorporated	Individual	Firm	
Kilowatt capacity of generators (rated) 1932	34,622,554	32,629,580	11,820	6,178	1,974,976
1927	25,811,305	24,356,579	14,153	12,539	1,428,034
1922	14,313,438	13,328,304	49,413	29,324	906,397
Percent increase or decrease (—) 1927-32	34.1	34.0	−16.5	−50.7	38.3
1922-27	80.3	82.7	−71.4	−57.2	57.6
Output, kilowatt-hours: Generated 1932	79,657,466,651	75,647,723,053	19,992,616	24,952,396	3,964,798,586
1927	74,686,378,010	71,250,738,217	16,020,079	40,081,242	3,379,538,472
1922	40,291,536,435	38,310,592,377	57,391,785	45,256,001	1,878,296,272
Percent increase or decrease (—) 1927-32	6.7	6.2	24.8	−37.7	17.3
1922-27	85.4	86.0	−72.1	−11.4	79.9
Energy received from other sources 1932	32,058,298,985	30,624,363,185	8,900,462	2,472,752	1,422,562,586
1927	22,142,255,709	20,971,220,098	15,058,042	5,644,928	1,150,332,641
1922	9,982,676,157	9,389,072,196	19,394,415	11,329,843	562,879,703
Percent increase or decrease (—) 1927-32	44.8	46.0	−40.9	−56.2	23.7
1922-27	121.8	123.4	−22.4	−50.2	104.4
Number of customers [8] 1932	23,861,642	21,608,441	18,255	6,906	2,228,040
1927	21,790,238	19,608,603	36,721	16,046	2,128,868
1922	12,709,868	10,908,478	102,664	53,982	1,644,744
Percent increase or decrease (—) 1927-32	9.5	10.2	−50.3	−57.0	4.7
1922-27	71.4	79.8	−64.2	−70.3	29.4

[1] Plant and equipment, real estate, etc.
[2] Includes $902,057,279 value of plant and equipment owned by companies engaged in the operation of electric light and power plants and of other public utilities, not distributed among the several utilities.
[3] No data by character of ownership. Commercial establishments reported $8,880,291,499 for plant and equipment for 1927, and $4,229,356,023 for 1922.
[4] Includes "Estimated value of free service."
[5] Miscellaneous electric revenues, net income from utilities other than electric, and nonoperating income. Does not include amount of rents credited to income.
[6] Not called for on schedule, except for municipal plants in cities of 25,000 inhabitants or more.
[7] Operating expenses, interest, and other deductions from gross income. Does not include amount of rent payments for lease of plant, equipment, etc., nor appropriations from surplus for retirement reserves.
[8] Includes ultimate consumers and those purchasing energy for resale.

TABLE 7.—PRIME MOVERS—NUMBER AND HORSEPOWER, BY TYPE AND BY HORSEPOWER GROUPS, ALL ESTABLISHMENTS: 1932 AND 1927

HORSEPOWER GROUP		TOTAL				STEAM TURBINES	
		Number	Horsepower	Percent distribution		Number	Horsepower
				Number	Horsepower		
Total	1932	11,185	47,966,962			2,822	32,904,158
	1927	12,030	35,710,128			2,864	24,323,304
Percent of total	1932			100.0	100.0	25.2	68.6
	1927			100.0	100.0	23.8	68.1
Average horsepower of prime movers	1932		4,289				11,660
	1927		2,968				8,493
500 horsepower or under	1932	5,398	1,147,107	48.3	2.4	125	42,457
	1927	6,680	1,266,713	55.5	3.5	287	80,892
Over 500 horsepower and under 2,000 horsepower	1932	2,837	2,857,493	25.4	6.0	860	951,316
	1927	2,675	2,665,184	22.2	7.5	935	1,022,338
2,000 horsepower and under 5,000 horsepower	1932	1,061	3,365,962	9.5	7.0	584	1,819,955
	1927	1,036	3,265,472	8.6	9.1	557	1,744,708
5,000 horsepower and under 20,000 horsepower	1932	1,188	11,959,268	10.6	24.9	719	7,384,315
	1927	1,174	11,985,704	9.8	33.6	712	7,521,136
20,000 horsepower and over	1932	701	28,637,132	6.3	59.7	534	22,706,115
	1927	465	16,527,055	3.9	46.3	373	13,954,230

HORSEPOWER GROUP		STEAM ENGINES		INTERNAL-COMBUSTION ENGINES		HYDROTURBINES	
		Number	Horsepower	Number	Horsepower	Number	Horsepower
Total	1932	1,299	649,476	3,298	881,301	3,766	13,532,027
	1927	2,267	994,273	3,177	548,288	3,722	9,844,263
Percent of total	1932	11.6	1.4	29.5	1.8	33.7	28.2
	1927	18.8	2.8	26.4	1.5	30.9	27.6
Average horsepower of prime movers	1932		500		267		3,593
	1927		439		173		2,645
500 horsepower or under	1932	973	239,370	2,864	502,054	1,436	363,226
	1927	1,812	416,248	2,989	403,004	1,592	366,569
Over 500 horsepower and under 2,000 horsepower	1932	274	246,575	425	350,982	1,278	1,308,620
	1927	373	315,447	187	143,284	1,180	1,184,115
2,000 horsepower and under 5,000 horsepower	1932	45	112,481	9	28,265	423	1,405,261
	1927	69	172,164	1	2,000	409	1,346,600
5,000 horsepower and under 20,000 horsepower	1932	7	51,050			462	4,523,903
	1927	13	90,414			449	4,374,154
20,000 horsepower and over	1932					167	5,931,017
	1927					92	2,572,825

TABLE 8.—CONSUMPTION OF FUEL, BY KIND, WITH COAL EQUIVALENT, ALL ESTABLISHMENTS: 1932

KIND	Unit of measure	Quantity	Equivalent tons of bituminous coal [1]	Percent of total equivalent fuel
Anthracite	Ton (2,240 lbs.)	1,392,040	1,559,085	4.6
Bituminous coal	Ton (2,000 lbs.)	25,998,430	25,998,430	76.7
Coke	Ton (2,000 lbs.)	152,841	132,905	.4
Fuel oil or gasoline	Barrel (42 gals.)	7,867,985	1,966,996	5.8
Gas, manufactured	1,000 cu. ft.	1,936,336	43,030	.1
Gas, natural	1,000 cu. ft.	96,365,126	4,189,788	12.4
Total equivalent fuel	Ton (2,000 lbs.)		33,890,234	100.0
Kilowatt-hours generated by fuel-burning generating stations.	Kilowatt-hour	46,090,016,902		
Pounds of coal per kilowatt-hour of output			1.47	

[1] The quantities of the several fuels other than bituminous coal have been reduced to their equivalents in tons (of 2,000 lbs.) of coal by the use of the following ratios supplied by the Bureau of Mines: Oil, 4 barrels, natural gas, 23,000 cubic feet; manufactured gas, 45,000 cubic feet; and coke, 1.15 tons.

TABLE 9.—GENERATORS—NUMBER, KILOWATT CAPACITY, AVERAGE CAPACITY, WITH PERCENT DISTRIBUTION, BY TYPE OF PRIME MOVER, ALL ESTABLISHMENTS: 1932

TYPE OF PRIME MOVER	Number	Capacity (kilowatts)	Average capacity (kilowatts)	PERCENT DISTRIBUTION	
				Number	Capacity
Total	11,111	34,622,554	3,116	100.0	100.0
Steam turbines	2,829	24,032,842	8,495	25.5	69.4
Steam engines	1,291	452,582	351	11.6	1.3
Internal-combustion engines	3,274	597,628	183	29.5	1.7
Hydroturbines	3,717	9,539,502	2,566	33.4	27.6

TABLE 10.—OUTPUT—CURRENT GENERATED BY ELECTRIC LIGHT AND POWER ESTABLISHMENTS, BY TYPE OF PRIME MOVER, AND CURRENT PURCHASED FROM SOURCES OUTSIDE THE INDUSTRY, ALL ESTABLISHMENTS: 1932

ITEM	Kilowatt-hours	Percent of total
Total, current generated by the electric light and power industry and current purchased from manufacturing plants and other sources (including imports from Canada)	81,543,267,321	100.0
Total generated by electric light and power industry	79,657,466,651	97.7
Steam	45,374,873,980	55.6
Water	33,567,449,749	41.2
Internal-combustion	715,142,922	.9
Purchased from other sources outside the industry, total [1]	1,885,800,670	2.3
Manufacturing plants, electric railways, etc.	1,330,912,094	1.6
From Canada	554,888,576	.7
Population of the United States	124,822,000	
Kilowatt-hours per capita	653	
Rated generator capacity (kilowatts)	34,622,554	
Kilowatt-hours per kilowatt capacity (electric light and power industry)	2,355	

[1] Does not include energy purchased from other electric companies nor received from plants of same system.

TABLE 11.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE ALL ESTABLISHMENTS: 1932

CLASS OF SERVICE	CUSTOMERS		CURRENT SOLD		
	Number	Percent distribution	Kilowatt-hours	Percent distribution	Average kilowatt-hours per customer
Total	23,858,411	100.0	65,895,975,835	100.0	2,762
Farm service (all uses)	613,753	2.6	1,504,257,106	2.3	2,451
Domestic service	19,285,560	80.8	11,790,139,511	17.9	611
Commercial service:					
Small light and power (retail)	3,527,794	14.8	12,059,463,977	18.3	3,418
Large light and power (wholesale)	379,402	1.6	32,380,076,220	49.1	85,345
Municipal street lighting	29,832	.1	2,235,668,364	3.4	74,942
Railroads—motive power:					
Street and interurban railways	474	(1)	4,392,943,247	6.7	9,267,813
Electrified steam-railroad divisions	367	(1)	762,204,863	1.2	2,076,852
Other service	21,229	.1	771,222,547	1.2	36,329

CLASS OF SERVICE	REVENUE FROM ELECTRIC SERVICE			
	Amount	Percent distribution	Average per customer (dollars)	Average per kilowatt-hour (cents)
Total	$1,821,105,524	100.0	76	2.8
Farm service (all uses)	42,773,826	2.3	70	2.8
Domestic service	649,764,750	35.7	34	5.5
Commercial service:				
Small light and power (retail)	491,852,492	27.0	139	4.1
Large light and power (wholesale)	483,390,649	26.5	1,274	1.5
Municipal street lighting	92,010,645	5.1	3,084	4.1
Railroads—motive power:				
Street and interurban railways	38,777,175	2.1	81,808	.9
Electrified steam-railroad divisions	7,018,519	.4	19,124	.9
Other service	15,517,468	.9	731	2.0

[1] Less than 1/10 of 1 percent.

TABLE 12.—SALES FOR RESALE—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS: 1932

CLASS OF SERVICE	Customers	Kilowatt-hours	Revenue
Total	3,231	22,369,097,291	$154,198,431
Municipalities in same State	1,095	1,350,921,240	17,010,923
Other electric companies in same State	1,833	13,467,006,888	94,100,680
Sold at State line	303	7,551,169,163	43,086,828

TABLE 13.—TOTAL OUTPUT; CURRENT SOLD TO ULTIMATE CONSUMERS AND FOR RESALE; BALANCE NOT SOLD, ACCORDING TO DISPOSAL; PERCENT DISTRIBUTION; ALL ESTABLISHMENTS: 1932

ITEM	Kilowatt-hours	Percent distribution
Output,[1] total	111,715,765,636	100.0
Current sold to ultimate consumers	65,895,975,835	59.0
Current sold for resale	22,369,097,291	20.0
Balance not sold	23,450,692,510	21.0
Free service	379,421,146	.3
Energy used by reporting establishments	1,466,474,092	1.3
Energy sent out of State in which generated, not reported as sold	4,962,049,578	4.4
Energy exchanged, not reported as sold [2]	2,950,682,249	2.6
Energy lost in transmission, distribution, conversion, etc	13,692,065,445	12.3

[1] Includes generated output and energy received from other sources. Since the energy "Received from other sources" was, in a large part, purchased from other electric light and power companies, a considerable duplication is involved, as such energy would also be included in the "Generated."
[2] Data incomplete, since item was not called for on schedule; however, many establishments reported this item separately.

TABLE 14.—CONSOLIDATED BALANCE SHEET FOR ALL ESTABLISHMENTS REPORTING FOR THE CENSUS OF ELECTRIC LIGHT AND POWER STATIONS, INCLUDING ASSETS AND LIABILITIES OF ALLIED NONELECTRIC INDUSTRIES, DECEMBER 31, 1932

ASSETS		LIABILITIES	
Kind	Amount	Kind	Amount
Fixed capital,[1] total	$14,983,497,191	Capital stocks	$6,935,848,539
Electric light and power	12,664,376,952	Cash investments (for unincorporated companies).	257,187,632
Electric railway	368,650,471	Long-term debt	6,887,737,577
Gas	1,395,524,098	Current liabilities	655,985,106
All other utilities	554,945,670	Retirement reserves	1,218,276,101
Investments	971,969,544	Other reserves	255,238,305
Current assets	1,007,862,894	Other credit items [2]	398,828,316
Unamortized debt discount and expense.	381,467,895	Surplus	1,133,580,913
Other debit items [3]	377,456,954		
Deficit	20,428,011		
Total assets	17,742,682,489	Total liabilities	17,742,682,489

[1] Plant and equipment, real estate, etc.
[2] Includes $106,038,491 reported as "Advances from affiliated companies."
[3] Includes $35,120,680 reported as "Advances to affiliated companies."

TABLE 15.—CONSOLIDATED INCOME, OPERATING-REVENUE, AND EXPENSE STATEMENT, ALL ESTABLISHMENTS: 1932

ACCOUNT	Electric light and power	All other	Total
Revenue from sale of utility service	[1] $1,975,303,955	$396,197,515	$2,371,501,470
Miscellaneous revenue	20,599,988	6,917,799	27,517,787
Total operating revenue	1,995,903,943	403,115,314	2,399,019,257
Operating expenses	[2] 803,100,258	229,134,620	1,032,234,878
Uncollectible bills	14,855,972	2,581,681	17,437,653
Taxes (including Federal income taxes)	205,150,695	39,725,367	244,876,062
Retirement expenses	154,047,202	32,034,711	186,081,913
Total revenue deductions	1,177,154,127	303,476,379	1,480,630,506
Operating income [3]	818,749,816	99,638,935	918,388,751
Rent charge or credit to income (net)	10,861,896	4,406,145	15,268,041
Balance of income [4]	807,887,920	95,232,790	903,120,710
Nonoperating income	(5)	(5)	61,752,611
Interest and amortization of debt discount and expense	(5)	(5)	361,358,012
Other deductions from income	(5)	(5)	27,843,905
Net income, all sources	(5)	(5)	575,671,404
Retirement appropriated from surplus	23,968,793	3,832,569	27,801,362
Dividend on stock	(5)	(5)	493,723,949

[1] This total includes $1,821,105,524 revenue received from "Sales to ultimate consumers", and $154,198,431 revenue received from "Sales for resale."
[2] Includes salaries and wages, $323,880,386; purchased power, $178,900,116; cost of fuel, $112,383,425; and maintenance expense, $87,721,901.
[3] "Total operating revenue" less "Total revenue deductions."
[4] "Operating income" less "Rent charge or credit to income (net)."
[5] Segregation of "Electric light and power" and "All other" not called for on schedule.

TABLE 16.—CURRENT GENERATED AND ENERGY RECEIVED FROM OTHER SOURCES, ALL ESTABLISHMENTS: 1932

ITEM	Kilowatt-hours	Percent distribution
Output,[1] total	111,715,765,636	100.0
Reported as generated	79,657,466,651	71.3
Reported as received from other sources, total	32,058,298,985	28.7
Purchased from other electric companies:		
In same State	18,569,198,987	16.6
In other States	6,935,099,171	6.2
Purchased from other sources (electric railways, manufacturing plants, etc.)	1,330,912,094	1.2
Received from plants of same system located in other States	[2] 5,223,088,733	4.7

[1] Includes generated output and energy received from other sources. Since the energy "Received from other sources" was, in a large part, purchased from other electric light and power companies, a considerable duplication is involved, as such energy would also be included in the "generated."
[2] Includes data for 2 establishments reported as receiving energy from plants of same system located in same State.

TABLE 17.—TRANSMISSION SYSTEMS—MILES OF CIRCUIT, BY INDIVIDUAL VOLTAGE, COMMERCIAL ESTABLISHMENTS: 1932

INDIVIDUAL VOLTAGE	Total	OVERHEAD			Underground
		Total	Pole line	Steel tower	
Miles of circuit, total	251,408	239,778	203,258	36,520	11,630
6,600	29,552	29,109	29,093	16	443
11,000	17,231	14,880	14,477	403	2,351
13,200	31,835	29,094	28,951	143	2,741
22,000	20,921	19,506	18,972	534	1,415
33,000	42,799	42,600	41,361	1,239	199
44,000	16,342	16,292	14,367	1,925	50
60,000	9,487	9,487	8,333	1,154	----------
66,000	29,708	29,542	20,775	8,767	166
110,000	17,079	17,079	6,893	10,186	(1)
132,000	8,254	8,218	1,679	6,539	36
220,000	1,903	1,903	(1)	1,903	----------
All other, total [2]	26,297	22,068	18,357	3,711	4,229

[1] Combined with "All other" to avoid disclosing the operations of individual establishments.
[2] "All other" includes:

Individual voltage	Miles of circuit	Individual voltage	Miles of circuit	Individual voltage	Miles of circuit
6,900	1,462	10,000	72	11,500	246
12,000	1,838	13,800	932	15,000	35
16,500	382	17,000	343	19,000	67
23,000	287	25,000	1,237	26,400	951
40,000	1,721	45,000	154	88,000	859
154,000	429				

The remaining 15,282 miles represent 37 individual voltages which cover 12,404 miles which cannot be separated without disclosing the operations of individual establishments, and 2,878 miles not specified as to voltage capacity.

CHAPTER II.—THE GEOGRAPHICAL DISTRIBUTION OF THE INDUSTRY

Prime movers.—Table 18 shows the distribution of prime movers by type. The Pacific, Mountain, and East South Central divisions predominate in the use of water power. The first two of these groups represent 34 percent of the total hydraulic water power of the United States. California and New York are the foremost States in this type of prime mover, representing 17 percent and 12 percent, respectively, of the total hydraulic water power. Mississippi, North Dakota, and Louisiana are the only States which report no hydroelectric equipment.

Fuel-operated plants predominate in horsepower in each of the other geographic divisions. The Middle Atlantic and East North Central divisions represent 58.2 percent of the total steam power reported. The leading State in the use of steam power is New York, which reports 14 percent of the total, followed by Illinois with 11 percent and Pennsylvania with 9 percent.

The West North Central and the West South Central divisions, though among the smaller groups in total horsepower of prime movers, lead in the horsepower of internal-combustion engines. This is due, partly, to the fact that these divisions include numerous small communities which are served by independent commercial and municipal plants, and also because of available abundant supplies of oil. These two divisions reported 58 percent of the total horsepower of internal-combustion engines. Texas, the leading State, contributes about 13 percent of the total, followed by Kansas, Nebraska, Iowa, and Oklahoma, in the order named.

Regional increase (table 19).—The maximum regional increase in generator capacity, comparing 1932 with 1927, is 55.6 percent in the West South Central group, followed by the Pacific, with 47.9 percent. The West South Central and West North Central divisions lead in increase in kilowatt-hours generated in this period, with 31.6 percent and 17.8 percent, respectively. The Pacific group shows the greatest rate of growth in number of customers with 14.8 percent, while the West South Central shows the greatest rate of increase in the amount of current sold to ultimate consumers, with 28.1 percent.

The maximum increase in generator capacity (145.2 percent) and in current generated (200.6 percent) is shown for New Hampshire; the maximum increase in number of customers (30.7 percent) for Nevada; and the maximum increase in current sold to ultimate consumers (66.4 percent) for North Dakota.

Consumption of fuel (table 22).—Bituminous coal is the predominant fuel. Middle Atlantic and East North Central groups report 70 percent of the aggregate. Its use was reported in all States with the exception of California, Louisiana, and Oregon. Fuel oil or gasoline represents 5.8 percent (table 8) of the aggregate fuel consumption in the United States and is used in all geographic divisions. The combined totals of the South Atlantic and the New England groups represent 51.4 percent of the total for the United States. Natural gas contributed 12.4 percent of the aggregate fuel consumption. The increase in the use of natural gas is especially noteworthy; 25 States reported its use covering 1932, as compared with 14 States in 1927. Texas is the leading State, reporting 33 percent of the total, followed by California with 14 percent, and Kansas with 10 percent.

Aside from the increased efficiency in the use of fuel, which has been discussed in connection with table 8, it is noted there have been decided shifts since 1927 in types of fuel used in different parts of the country, although the present report does not give the 1927 figures for geographic divisions and States. The East South Central group reports the largest decrease in bituminous coal consumption during this period, but shows a great increase in the consumption of natural gas. In the consumption of fuel oil, the West North Central, East South Central, West South Central, and Pacific groups show decreases in the 5-year period, which are offset by large increases in the consumption of natural gas. The increase in the use of natural gas is an outstanding feature. A comparison with

1927 shows an increase of 62.3 percent of the aggregate. The West South Central division, which reports the largest consumption of natural gas, shows an increase of 49 percent in the 5-year period.

Relative hydro and other output (tables 18 and 23).—Statistics indicate that wherever water power is available it usually carries the base loads, other prime movers being used as auxiliary or stand-by, or to meet deficiency in the water supply. The output from water power during 1932 was 2,481 kilowatt-hours per horsepower; from steam, 1,352 kilowatt-hours; and from internal-combustion engines, 811 kilowatt-hours. The Pacific group represents over 30 percent of the total amount of energy generated by water; the combined totals of the Middle Atlantic and the East North Central groups represent 65.2 percent of the total amount of energy generated by steam power; and the West South Central and West North Central groups represent 58.4 percent of the total generated by internal-combustion engines.

Voltage of transmission lines.—The schedule called for certain individual voltage groups which had been adopted, generally, for transmission purposes. Distribution systems were not to be included, except rural lines having 6,600 volts or more. Table 25 gives data for miles of circuit for commercial establishments, only, by individual voltage groups, for the United States and geographic divisions, only. In addition, 3,794 miles of circuit were reported by municipal establishments.

Sales to ultimate consumers.—Table 24 presents statistics for farm service, domestic service, commercial service—small light and power (retail) and large light and power (wholesale), and municipal street lighting. It is impossible to give statistics by geographic divisions and States for the three remaining types of service—street and interurban railways, electrified steam-railroad divisions, and other service, without disclosing the operations of individual establishments.

Of the several customer groups, by far the smallest use of energy per customer is found in that sold for domestic service. The average small commercial user takes more than five times as much as the average domestic customer. The revenues per customer and per kilowatt-hour for a given class of service vary in different parts of the country. There appears to be no general inter-relationship between total energy consumption per year, per customer, revenue per customer, and price per kilowatt-hour. These matters apparently depend largely on local conditions. Thus, in the case of domestic service, abundant water power, large consumption per customer, and low rates generally go together. Farm service shows the widest range in revenue per kilowatt-hour, due to the fact that it combines energy used in irrigation and in other farm activities. A large part of this service was doubtless used for irrigation, since the average revenue per kilowatt-hour for this type, as a whole, was only 2.8 cents. The range in average revenue per kilowatt-hour in individual States, however, varies from 1.5 cents to 11 cents.

TABLE 18.—PRIME MOVERS—NUMBER AND HORSEPOWER, BY TYPE, AND HORSEPOWER PER CAPITA, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	TOTAL		STEAM TURBINES		STEAM ENGINES		INTERNAL-COMBUSTION ENGINES		HYDROTURBINES		Population, 1932	Horsepower per capita
	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower		
UNITED STATES	11,185	47,966,962	2,822	32,904,158	1,299	649,476	3,298	881,301	3,766	13,532,027	124,822,000	0.38
GEOGRAPHIC DIVISIONS:												
New England	923	3,643,604	221	2,360,268	57	48,813	52	13,459	593	1,221,064	8,258,000	.44
Middle Atlantic	1,274	11,310,305	448	9,121,476	116	86,484	123	41,970	587	2,060,375	26,741,000	.42
East North Central	2,120	11,365,729	710	10,139,584	317	177,844	239	75,273	854	973,028	25,755,000	.44
West North Central	2,220	3,655,066	440	2,597,219	349	135,960	1,115	288,957	316	632,930	13,387,000	.27
South Atlantic	1,193	6,129,902	325	3,179,278	108	28,202	291	87,773	469	2,834,649	16,009,000	.38
East South Central	604	2,051,117	166	942,225	86	39,910	253	43,754	99	1,025,228	10,006,000	.20
West South Central	1,301	2,471,670	278	2,068,527	134	56,459	841	225,600	48	121,084	12,409,000	.20
Mountain	922	1,674,732	123	443,116	105	42,052	309	86,642	385	1,102,922	3,748,000	.45
Pacific	628	5,664,837	111	2,052,465	27	33,752	75	17,873	415	3,560,747	8,509,000	.67
NEW ENGLAND:												
Maine	213	352,999	14	71,511	3	1,350	16	2,023	180	278,115	801,000	.44
New Hampshire	132	420,911	13	80,179	8	3,118	13	2,161	98	335,453	468,000	.90
Vermont and Rhode Island [1]	181	599,232	28	340,981	8	2,382	9	450	136	255,419	1,058,000	.57
Massachusetts	277	1,590,644	114	1,305,416	36	41,613	13	7,225	114	236,390	4,297,000	.37
Connecticut	120	679,818	52	562,181	2	350	1	1,600	65	115,687	1,634,000	.42
MIDDLE ATLANTIC:												
New York	723	6,276,029	166	4,620,676	60	47,858	32	20,780	465	1,586,715	12,852,000	.49
New Jersey	92	1,426,145	67	1,413,650	4	1,450	13	4,100	8	6,945	4,148,000	.34
Pennsylvania	459	3,608,131	215	3,087,150	52	37,176	78	17,090	114	466,715	9,741,000	.37
EAST NORTH CENTRAL:												
Ohio	343	2,916,741	200	2,844,121	89	43,572	31	7,645	23	21,403	6,753,000	.43
Indiana	267	1,331,301	153	1,247,355	37	16,311	46	18,807	31	48,828	3,275,000	.41
Illinois	436	3,698,320	183	3,535,370	111	74,812	47	12,425	95	75,713	7,768,000	.48
Michigan	589	2,234,955	100	1,744,090	17	6,197	65	22,841	407	461,827	4,983,000	.45
Wisconsin	485	1,184,412	74	768,648	63	36,952	50	13,555	298	365,257	2,976,000	.40
WEST NORTH CENTRAL:												
Minnesota	313	658,845	67	441,250	66	26,407	76	15,986	104	175,202	2,585,000	.25
Iowa	438	843,009	95	538,400	103	39,929	155	54,066	85	210,614	2,479,000	.34
Missouri	337	1,021,731	90	748,042	42	18,580	183	49,896	22	205,213	3,656,000	.28
North Dakota	115	104,455	26	84,135	26	10,365	63	9,955	----------	----------	685,000	.15
South Dakota	177	99,250	15	56,070	18	8,868	133	26,771	11	7,550	700,000	.14
Nebraska	420	349,038	58	256,565	61	15,411	257	57,111	53	19,951	1,388,000	.25
Kansas	411	578,729	89	472,757	33	16,400	248	75,172	41	14,400	1,894,000	.31

SOUTH ATLANTIC:												
Delaware, District of Columbia, and Maryland [1]	98	1,226,753	53	813,866	1	250	34	10,487	10	402,150	2,386,000	.51
Virginia	208	568,468	53	427,342	8	1,439	36	9,227	111	130,460	2,435,000	.23
West Virginia	106	731,400	52	638,441	11	2,437	25	6,739	18	83,783	1,761,000	.42
North Carolina	210	1,380,658	45	463,350	14	4,796	32	8,258	119	904,254	3,244,000	.43
South Carolina	137	939,956	22	193,874	12	3,422	11	2,215	92	740,445	1,745,000	.54
Georgia	194	748,092	34	184,585	37	8,028	21	3,202	102	552,277	2,910,000	.26
Florida	240	534,575	66	457,820	25	7,830	132	47,645	17	21,280	1,528,000	.35
EAST SOUTH CENTRAL:												
Kentucky	145	455,367	59	302,241	27	8,316	41	3,470	18	141,340	2,638,000	.17
Tennessee	168	578,618	49	266,307	29	17,655	37	5,017	53	289,639	2,650,000	.22
Alabama	84	925,878	18	315,470	8	8,624	30	7,535	28	594,249	2,682,000	.35
Mississippi	207	91,254	40	58,207	22	5,315	145	27,732			2,036,000	.04
WEST SOUTH CENTRAL:												
Arkansas	165	207,035	42	88,771	33	12,380	80	16,376	10	89,508	1,867,000	.11
Louisiana	220	407,084	42	426,042	6	2,685	172	38,357			2,138,000	.22
Oklahoma	302	470,578	65	392,403	41	23,329	189	52,293	7	2,553	2,440,000	.19
Texas	614	1,326,973	129	1,161,311	54	18,065	400	118,574	31	29,023	5,964,000	.22
MOUNTAIN:												
Montana	130	451,820	9	10,260	16	13,126	34	4,491	71	423,943	[2] 537,606	.84
Idaho	103	307,745			3	1,250	9	3,158	91	303,337	447,000	.69
Wyoming	97	50,364	24	37,124	18	4,637	41	5,650	14	2,953	229,000	.22
Colorado	226	310,645	53	194,094	39	12,457	65	13,584	69	90,510	1,047,000	.30
Arizona and New Mexico [1]	230	333,308	32	143,972	29	10,582	131	50,378	38	128,376	879,000	.38
Utah	107	201,115	3	54,666			14	6,261	90	140,188	515,000	.39
Nevada	29	19,735	2	3,000			15	3,120	12	13,615	93,000	.21
PACIFIC:												
Washington	179	1,230,158	28	295,837	10	6,587	16	2,180	125	925,554	1,588,000	.77
Oregon	156	537,165	27	248,709	9	4,835	28	6,420	92	277,201	974,000	.55
California	293	3,897,514	56	1,507,919	8	22,330	31	9,273	198	2,357,992	5,947,000	.66

[1] Combined to avoid disclosing the operations of individual establishments.
[2] Population Apr. 1, 1930; decreased 1920 to 1930; no estimate made. Other population data are estimates prepared in the Bureau of the Census for the year 1932.

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TABLE 19.—GENERATOR CAPACITY, CURRENT GENERATED, NUMBER OF CUSTOMERS, AND SALES TO ULTIMATE CONSUMERS, WITH PERCENT OF INCREASE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932 AND 1927

DIVISION AND STATE	RATED GENERATOR CAPACITY (KILOWATTS)			CURRENT GENERATED (KILOWATT-HOURS)			NUMBER OF CUSTOMERS (ULTIMATE CONSUMERS)			CURRENT SOLD TO ULTIMATE CONSUMERS (KILOWATT-HOURS)		
	1932	1927	Percent increase [1]	1932	1927	Percent increase [1]	1932	1927	Percent increase [1]	1932	1927	Percent increase [1]
UNITED STATES	34,622,554	25,811,305	34.1	79,657,466,651	74,686,378,010	6.7	23,858,411	21,786,317	9.5	65,895,975,835	63,612,481,088	3.6
GEOGRAPHIC DIVISIONS:												
New England	2,639,387	2,124,315	24.2	5,330,233,841	4,750,193,632	12.2	2,225,513	2,007,249	10.9	4,487,960,970	3,956,288,197	13.4
Middle Atlantic	8,271,328	6,373,454	29.8	20,340,794,839	19,281,644,834	5.5	6,674,973	6,032,953	10.6	18,126,797,887	17,869,064,651	1.4
East North Central	8,246,758	6,245,084	32.1	18,106,043,295	18,211,894,585	−0.6	5,650,468	5,312,752	6.4	14,894,151,484	15,257,328,963	−2.4
West North Central	2,615,095	1,950,096	34.1	5,357,886,862	4,549,263,907	17.8	2,326,873	2,187,518	6.4	4,754,347,165	4,060,726,799	17.1
South Atlantic	4,290,917	3,144,019	36.5	9,458,694,089	8,445,216,788	12.0	1,778,544	1,564,351	13.7	6,750,375,083	7,014,309,562	−3.8
East South Central	1,480,254	1,049,765	41.0	2,993,770,460	2,777,268,044	7.8	773,372	721,482	7.2	2,890,544,313	2,455,304,623	17.7
West South Central	1,792,286	1,152,073	55.6	4,308,490,556	3,275,021,117	31.6	1,234,587	1,133,230	8.9	3,463,756,781	2,703,455,554	28.1
Mountain	1,157,200	980,828	18.0	2,346,832,279	3,389,551,356	−30.8	633,851	597,460	6.1	1,958,421,357	2,856,940,800	−31.5
Pacific	4,129,329	2,791,671	47.9	11,414,720,430	10,006,323,747	14.1	2,560,230	2,229,322	14.8	8,569,620,795	7,439,061,939	15.2
NEW ENGLAND:												
Maine	265,153	179,364	47.8	762,111,856	560,664,446	35.9	186,564	184,873	0.9	624,685,947	473,630,933	31.9
New Hampshire	283,321	115,554	145.2	680,606,529	226,444,199	200.6	120,549	106,215	13.5	207,198,479	150,824,272	37.4
Vermont and Rhode Island [2]	432,093	336,120	28.6	811,459,260	749,601,854	8.3	270,261	245,352	10.2	545,301,256	505,312,902	7.9
Massachusetts	1,156,134	1,077,337	7.3	2,158,485,603	2,245,301,081	−3.9	1,206,311	1,077,818	11.9	2,194,463,957	2,018,841,347	8.7
Connecticut	502,686	415,940	20.9	917,570,593	968,182,052	−5.2	441,828	392,991	12.4	916,311,331	807,678,743	13.4
MIDDLE ATLANTIC:												
New York	4,577,631	3,157,615	45.0	10,976,563,667	9,917,685,550	10.7	3,531,993	3,193,782	10.6	9,337,070,538	9,378,300,989	−0.4
New Jersey	1,062,445	683,876	55.4	2,990,678,924	1,861,984,763	60.6	1,099,729	981,017	12.1	2,141,049,523	1,687,616,398	26.9
Pennsylvania	2,631,252	2,531,963	3.9	6,373,552,248	7,501,974,521	−15.0	2,043,251	1,858,154	10.0	6,648,677,826	6,803,147,264	−2.3
EAST NORTH CENTRAL:												
Ohio	2,145,614	1,742,856	23.1	4,868,953,749	4,724,016,312	3.1	1,506,211	1,370,463	9.9	3,996,804,449	4,224,192,785	−5.4
Indiana	987,882	653,063	51.3	2,422,939,907	1,746,153,163	38.8	653,156	638,575	2.3	1,430,079,856	1,521,709,893	−5.4
Illinois	2,605,826	2,035,905	28.0	5,446,742,903	6,075,352,208	−10.3	1,808,655	1,766,722	2.4	5,241,427,510	4,931,851,445	6.3
Michigan	1,657,436	1,188,880	39.4	3,532,622,960	3,773,636,019	−6.4	1,050,571	981,545	7.0	2,901,927,459	3,224,931,826	−10.0
Wisconsin	850,000	624,380	36.1	1,834,783,776	1,892,736,883	−3.1	631,875	555,447	13.8	1,314,912,210	1,354,643,014	−2.9
WEST NORTH CENTRAL:												
Minnesota	477,220	372,651	28.1	995,182,260	843,357,074	18.0	484,078	453,832	6.7	1,001,878,122	923,662,445	8.5
Iowa	600,369	482,122	24.5	1,483,096,406	1,429,169,797	3.8	460,607	439,188	4.9	740,899,043	684,865,220	8.2
Missouri	716,502	472,272	51.7	1,214,488,146	891,179,442	36.3	655,799	619,994	5.8	1,766,383,944	1,452,304,582	21.6
North Dakota	70,400	36,094	95.0	140,315,552	59,409,194	136.2	70,078	60,486	15.9	79,087,639	47,519,232	66.4
South Dakota	66,929	48,172	38.9	87,402,102	90,407,255	−3.3	85,058	79,712	6.7	96,844,941	67,320,391	43.9
Nebraska	252,186	180,567	39.7	561,795,147	405,055,833	38.7	236,019	221,666	6.5	438,224,049	300,887,152	45.6
Kansas	431,489	358,218	20.5	875,607,249	830,685,312	5.4	335,234	312,640	7.2	631,029,427	584,167,777	8.0

SOUTH ATLANTIC:												
Delaware, District of Columbia, Maryland, and West Virginia [2]	1,395,892	1,062,821	31.3	3,674,059,524	3,005,007,335	22.3	691,613	582,669	18.7	2,464,156,007	2,205,287,377	11.7
Virginia	409,468	364,633	12.3	962,317,683	973,766,450	−1.2	267,637	210,987	26.8	814,386,516	687,210,351	18.5
North Carolina	1,004,687	551,985	82.0	1,651,234,533	2,036,121,761	−18.9	262,768	219,960	19.5	1,288,397,395	1,907,681,980	−32.5
South Carolina	642,856	491,208	30.9	1,294,883,416	1,116,266,957	16.0	107,172	94,626	13.3	763,879,014	799,110,911	−4.4
Georgia	474,962	380,130	24.9	1,269,290,375	746,074,405	70.1	211,650	196,163	7.9	958,741,517	980,455,685	−2.2
Florida	363,052	293,242	23.8	606,908,558	567,979,880	6.9	237,704	259,946	−8.6	460,814,634	434,563,258	6.0
EAST SOUTH CENTRAL:												
Kentucky	339,771	298,039	14.0	681,946,841	505,564,056	34.9	272,507	247,985	9.9	626,733,662	547,678,714	14.4
Tennessee	425,541	338,412	25.7	1,050,404,625	936,874,282	12.1	238,022	223,560	6.5	1,054,270,691	747,505,833	41.0
Alabama	649,273	349,427	85.8	1,209,646,423	1,270,158,764	−4.8	171,079	170,368	0.4	1,010,552,094	1,039,737,417	−2.8
Mississippi	65,669	63,887	2.8	51,772,571	64,670,942	−19.9	91,764	79,619	15.3	198,987,866	120,382,659	65.3
WEST SOUTH CENTRAL:												
Arkansas	152,808	94,955	60.9	155,019,698	174,197,548	−11.0	115,977	115,271	0.6	283,021,562	186,194,149	52.0
Louisiana	328,624	207,542	58.3	1,171,951,428	634,594,420	84.7	191,219	168,813	13.3	639,768,883	447,733,078	42.9
Oklahoma	343,210	227,575	50.8	725,488,247	654,513,265	10.8	267,816	239,738	11.7	610,264,903	596,663,846	2.3
Texas	967,644	622,001	55.6	2,256,031,183	1,811,715,884	24.5	659,575	609,408	8.2	1,930,701,433	1,472,864,481	31.1
MOUNTAIN:												
Montana and Utah [2]	455,512	401,264	13.5	911,366,218	1,739,622,767	−47.6	194,859	193,839	0.5	901,459,582	1,854,742,335	−51.4
Idaho	208,007	208,117	−0.1	473,289,670	713,213,718	−33.6	77,735	78,485	−1.0	296,091,257	264,260,096	12.0
Wyoming	36,272	34,748	4.4	74,596,866	67,070,330	11.2	34,669	31,008	11.8	62,070,419	48,369,836	28.3
Colorado	221,246	198,919	11.2	437,329,881	499,565,961	−12.5	207,565	197,240	5.2	345,607,996	396,522,278	−12.8
Arizona and New Mexico [2]	223,085	124,690	78.9	412,616,126	312,941,288	31.9	98,660	81,310	21.3	266,986,761	229,111,526	16.5
Nevada	13,078	13,090	−0.1	37,633,518	57,137,292	−34.1	20,363	15,578	30.7	86,205,342	63,934,729	34.8
PACIFIC:												
Washington	882,541	603,684	46.2	2,544,766,928	2,105,288,534	20.9	417,471	392,666	6.3	1,835,963,325	1,620,061,418	13.3
Oregon	382,429	222,997	71.5	968,614,120	840,062,576	15.3	237,313	209,051	13.5	742,723,495	658,083,999	12.9
California	2,864,350	1,964,990	45.8	7,901,339,382	7,060,972,637	11.9	1,905,446	1,627,605	17.1	5,990,933,975	5,160,916,522	16.1

[1] Minus sign (−) denotes a decrease.
[2] Combined to avoid disclosing the operations of individual establishments.

TABLE 20.—GENERATORS—NUMBER AND KILOWATT CAPACITY BY TYPE OF PRIME MOVER, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	TOTAL		STEAM						INTERNAL-COMBUSTION ENGINES		HYDROTURBINES	
			Total		Turbines		Engines					
	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts
UNITED STATES	11,111	34,622,554	4,120	24,485,424	2,829	24,032,842	1,291	452,582	3,274	597,628	3,717	9,539,502
GEOGRAPHIC DIVISIONS:												
New England	896	2,639,387	275	1,772,886	220	1,742,089	55	30,797	52	9,301	569	857,200
Middle Atlantic	1,262	8,271,328	562	6,772,771	449	6,712,052	113	60,719	121	29,091	579	1,469,466
East North Central	2,016	8,246,758	1,020	7,509,149	709	7,384,304	311	124,845	215	41,761	781	695,848
West North Central	2,227	2,615,095	788	1,954,102	442	1,860,191	346	93,911	1,123	200,236	316	460,757
South Atlantic	1,192	4,290,917	431	2,310,253	320	2,290,787	111	19,466	287	59,692	474	1,920,972
East South Central	613	1,489,254	255	728,532	166	697,065	89	31,467	259	29,744	99	721,978
West South Central	1,295	1,792,286	408	1,545,504	275	1,508,886	133	36,618	840	156,937	47	89,845
Mountain	912	1,157,200	228	350,860	122	321,018	106	29,842	306	58,523	378	747,817
Pacific	698	4,129,329	153	1,541,367	126	1,516,450	27	24,917	71	12,343	474	2,575,619
NEW ENGLAND:												
Maine	212	265,153	17	54,165	14	53,200	3	965	16	1,354	179	209,634
New Hampshire	132	283,321	21	62,357	13	60,000	8	2,357	13	1,538	98	219,426
Vermont and Rhode Island [1]	180	432,093	37	254,790	28	253,000	9	1,790	9	304	134	176,999
Massachusetts	263	1,156,134	148	982,614	114	957,049	34	25,565	13	4,995	102	168,525
Connecticut	109	502,686	52	418,960	51	418,840	1	120	1	1,110	56	82,616
MIDDLE ATLANTIC:												
New York	718	4,577,631	223	3,428,793	163	3,394,000	60	34,793	32	14,521	463	1,134,317
New Jersey	92	1,062,445	71	1,054,150	67	1,053,150	4	1,000	13	2,925	8	5,370
Pennsylvania	452	2,631,252	268	2,289,828	219	2,264,902	49	24,926	76	11,645	108	329,779
EAST NORTH CENTRAL:												
Ohio	344	2,145,614	288	2,124,874	199	2,095,000	89	29,874	31	5,155	25	15,585
Indiana	265	987,882	187	939,918	151	929,146	36	10,772	38	8,835	40	39,129
Illinois	405	2,605,826	291	2,552,529	183	2,498,374	108	54,155	45	8,607	69	44,690
Michigan	540	1,657,436	116	1,298,068	99	1,293,799	17	4,269	51	9,691	373	349,677
Wisconsin	462	850,000	138	593,760	77	567,985	61	25,775	50	9,473	274	246,767
WEST NORTH CENTRAL:												
Minnesota	313	477,220	133	341,491	67	323,520	66	17,971	76	10,933	104	124,796
Iowa	434	600,369	196	406,555	95	377,817	101	28,738	156	37,352	82	156,462
Missouri	336	716,502	132	530,771	90	518,334	42	12,437	181	33,493	22	152,238
North Dakota	115	70,400	52	63,403	26	56,500	26	6,903	63	6,997	----	----
South Dakota	177	66,929	33	43,730	15	37,850	18	5,880	133	19,219	11	3,980
Nebraska	441	252,186	119	199,372	59	189,237	60	10,135	266	39,110	56	13,704
Kansas	412	431,489	123	368,780	90	356,933	33	11,847	248	53,132	41	9,577

SOUTH ATLANTIC:												
Delaware, District of Columbia, and Maryland [1]	98	857,067	54	578,660	53	578,420	1	240	34	7,107	10	271,300
Virginia	207	409,468	60	308,005	52	306,950	8	1,055	36	6,361	111	95,102
West Virginia	102	538,825	60	477,430	49	475,710	11	1,720	24	4,968	18	56,427
North Carolina	214	1,004,687	58	347,905	45	344,617	13	3,288	32	5,758	124	651,024
South Carolina	146	642,856	37	146,646	21	144,150	16	2,496	11	1,435	98	494,775
Georgia	193	474,962	71	134,978	34	129,270	37	5,708	20	2,090	102	337,894
Florida	232	363,052	91	316,629	66	311,670	25	4,959	130	31,973	11	14,450
EAST SOUTH CENTRAL:												
Kentucky	145	339,771	86	231,824	59	225,930	27	5,894	41	2,622	18	105,325
Tennessee	168	425,541	78	211,323	49	197,551	29	13,772	37	3,435	53	210,783
Alabama	87	649,273	29	238,227	18	230,275	11	7,952	30	5,176	28	405,870
Mississippi	213	65,669	62	47,158	40	43,309	22	3,849	151	18,511	----------	----------
WEST SOUTH CENTRAL:												
Arkansas	164	152,808	74	73,801	42	65,330	32	8,471	80	12,301	10	66,706
Louisiana	220	328,624	48	301,964	42	299,963	6	2,001	172	26,660	----------	----------
Oklahoma	300	343,210	103	305,035	62	291,598	41	13,437	190	36,251	7	1,924
Texas	611	967,644	183	864,704	129	851,995	54	12,709	398	81,725	30	21,215
MOUNTAIN:												
Montana	130	318,313	26	16,452	9	7,450	17	9,002	33	2,901	71	298,960
Idaho	100	208,007	3	700	----------	----------	3	700	9	2,222	88	205,085
Wyoming	97	36,272	42	30,907	24	27,620	18	3,287	41	3,445	14	1,920
Colorado	219	221,246	91	149,856	52	140,848	39	9,008	65	8,917	63	62,473
Arizona and New Mexico [1]	228	223,085	61	109,945	32	102,100	29	7,845	129	34,904	38	78,236
Utah	109	137,199	3	41,000	3	41,000	----------	----------	14	4,343	92	91,856
Nevada	29	13,078	2	2,000	2	2,000	----------	----------	15	1,791	12	9,287
PACIFIC:												
Washington	173	882,541	38	225,323	28	220,900	10	4,423	16	1,539	119	655,679
Oregon	148	382,429	34	185,000	27	181,500	7	3,500	24	4,398	90	193,031
California	377	2,864,359	81	1,131,044	71	1,114,050	10	16,994	31	6,406	265	1,726,909

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 21.—NUMBER OF ESTABLISHMENTS BY CHARACTER OF OWNERSHIP, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	Total	COMMERCIAL			Municipal
		Incorporated	Individual	Firm	
UNITED STATES	3,429	1,425	148	54	1,802
GEOGRAPHIC DIVISIONS:					
New England	304	207	16	1	80
Middle Atlantic	265	149	7	4	105
East North Central	705	286	23	12	384
West North Central	929	208	41	12	668
South Atlantic	381	164	8	3	206
East South Central	137	62	5	3	67
West South Central	237	84	8	1	144
Mountain	303	169	23	10	101
Pacific	168	96	17	8	47
NEW ENGLAND:					
Maine	55	42	5		8
New Hampshire	36	26	4		6
Vermont and Rhode Island [1]	69	44	7	1	17
Massachusetts	113	70			43
Connecticut	31	25			6
MIDDLE ATLANTIC:					
New York	122	61	5	3	53
New Jersey	25	13			12
Pennsylvania	118	75	2	1	40
EAST NORTH CENTRAL:					
Ohio	191	72	5	2	112
Indiana	134	46	4	2	82
Illinois	101	46	1		54
Michigan	102	43	7	1	51
Wisconsin	177	79	6	7	85
WEST NORTH CENTRAL:					
Minnesota	158	30	5	3	120
Iowa	176	49	2	2	123
Missouri	104	42	5	4	53
North Dakota	35	15	2		18
South Dakota	71	20	8	1	42
Nebraska	201	22	11	2	166
Kansas	184	30	8		146
SOUTH ATLANTIC:					
Delaware, District of Columbia, and Maryland [1]	39	23			16
Virginia	47	29	1	2	15
West Virginia	41	36	1		4
North Carolina	103	34	2	1	66
South Carolina	43	19	2		22
Georgia	67	14	1		52
Florida	41	9	1		31
EAST SOUTH CENTRAL:					
Kentucky	28	19			9
Tennessee	46	25	2	2	17
Alabama	30	13	2	1	14
Mississippi	33	5	1		27
WEST SOUTH CENTRAL:					
Arkansas	34	20		1	13
Louisiana	47	18	1		28
Oklahoma	92	20	3		69
Texas	64	26	4		34
MOUNTAIN:					
Montana	27	15	7	1	4
Idaho	48	29	2	1	16
Wyoming	44	24	5	3	12
Colorado	61	25	5	3	28
Arizona and New Mexico [1]	60	51	3	1	5
Utah	45	13			32
Nevada	18	12	1	1	4
PACIFIC:					
Washington	69	45	6	3	15
Oregon	36	20	3	2	11
California	63	31	8	3	21

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 22.—CONSUMPTION OF FUEL, BY KIND, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	Anthracite (tons of 2,240 pounds)	Bituminous coal (tons of 2,000 pounds)	Coke (tons of 2,000 pounds)	Fuel oil or gasoline (barrels of 42 gallons)	GAS	
					Manufactured (1,000 cubic feet)	Natural (1,000 cubic feet)
UNITED STATES	1,392,040	25,998,430	152,841	7,867,985	1,936,336	96,365,126
GEOGRAPHIC DIVISIONS:						
New England	544	1,189,528	4,758	1,997,640	29,766	----------
Middle Atlantic	1,380,546	7,565,225	----------	853,461	594	50,089
East North Central	----------	10,629,733	88,292	155,056	900,543	12,697,740
West North Central	4,729	2,905,103	----------	992,122	715,833	15,015,723
South Atlantic	4,721	2,242,061	----------	2,044,248	64,107	192,086
East South Central	----------	483,700	----------	101,525	----------	3,780,782
West South Central	----------	566,864	55,269	552,013	2,972	47,448,203
Mountain	1,500	406,201	4,522	240,076	222,521	3,568,736
Pacific	----------	10,015	----------	931,244	----------	13,611,767
NEW ENGLAND:						
Maine	----------	7,998	----------	14,256	----------	----------
New Hampshire	----------	5,526	----------	1,795	----------	----------
Vermont and Rhode Island [1]	----------	6,448	1,816	616,953	----------	----------
Massachusetts	544	797,583	723	982,745	29,766	----------
Connecticut	----------	371,973	2,219	381,891	----------	----------
MIDDLE ATLANTIC:						
New York	----------	3,497,922	----------	241,559	----------	24,635
New Jersey	23,478	1,614,326	----------	594,809	----------	----------
Pennsylvania	1,357,068	2,452,977	----------	17,093	594	25,454
EAST NORTH CENTRAL:						
Ohio	----------	3,217,709	----------	18,865	77,404	4,760,989
Indiana	----------	1,438,732	48,192	23,073	625,000	7,936,751
Illinois	----------	3,858,515	40,100	42,375	----------	----------
Michigan	----------	1,421,755	----------	33,143	198,139	----------
Wisconsin	----------	693,022	----------	37,600	----------	----------
WEST NORTH CENTRAL:						
Minnesota	----------	461,832	----------	40,532	----------	211,368
Iowa	4,729	732,599	----------	136,939	715,708	478,600
Missouri	----------	821,950	----------	190,857	----------	2,148,464
North Dakota	----------	234,040	----------	20,241	----------	167,175
South Dakota	----------	104,555	----------	58,191	125	82,024
Nebraska	----------	318,545	----------	208,210	----------	1,838,433
Kansas	----------	231,582	----------	337,152	----------	10,089,659
SOUTH ATLANTIC:						
Delaware, District of Columbia, and Maryland [1]	----------	621,733	----------	44,067	64,107	----------
Virginia	4,721	434,631	----------	30,311	----------	----------
West Virginia	----------	1,039,945	----------	1,667	----------	77,436
North Carolina	----------	93,850	----------	22,299	----------	----------
South Carolina	----------	40,497	----------	4,973	----------	----------
Georgia	----------	11,264	----------	229,049	----------	114,660
Florida	----------	141	----------	1,711,882	----------	----------
EAST SOUTH CENTRAL:						
Kentucky	----------	364,854	----------	8,513	----------	4,121
Tennessee	----------	75,171	----------	21,721	----------	3,229,453
Alabama	----------	11,416	----------	8,480	----------	----------
Mississippi	----------	32,259	----------	62,811	----------	547,208
WEST SOUTH CENTRAL:						
Arkansas	----------	30,910	----------	46,522	----------	835,296
Louisiana	----------	----------	----------	124,871	2,972	8,223,031
Oklahoma	----------	141,780	55,269	167,286	----------	6,931,009
Texas	----------	394,174	----------	213,334	----------	31,458,867
MOUNTAIN:						
Montana	----------	44	----------	4,161	----------	567,223
Idaho	----------	79	----------	1,545	----------	----------
Wyoming	----------	91,999	4,522	6,335	----------	301,502
Colorado	----------	277,820	----------	36,650	----------	425,318
Arizona and New Mexico [1]	1,500	21,168	----------	176,382	222,521	2,274,093
Utah	----------	7,491	----------	5,529	----------	----------
Nevada	----------	7,600	----------	10,074	----------	----------
PACIFIC:						
Washington	----------	10,015	----------	122,164	----------	----------
Oregon	----------	----------	----------	97,022	----------	----------
California	----------	----------	----------	712,058	----------	13,611,767

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 23.—CURRENT GENERATED, BY TYPE OF PRIME MOVER, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	Total (kilowatt-hours)	KILOWATT-HOURS GENERATED BY—		
		Steam	Water	Internal combustion
UNITED STATES	79, 657, 466, 651	45, 374, 873, 980	33, 567, 449, 749	715, 142, 922
GEOGRAPHIC DIVISIONS:				
New England	5, 330, 233, 841	2, 472, 850, 762	2, 843, 685, 082	13, 697, 997
Middle Atlantic	20, 340, 794, 839	13, 824, 400, 751	6, 480, 708, 134	35, 685, 954
East North Central	18, 106, 043, 295	15, 753, 462, 009	2, 299, 418, 004	53, 163, 282
West North Central	5, 357, 886, 862	3, 533, 461, 769	1, 565, 170, 307	259, 254, 756
South Atlantic	9, 458, 694, 089	3, 580, 379, 601	5, 811, 368, 668	66, 945, 820
East South Central	2, 993, 770, 460	547, 856, 716	2, 417, 142, 479	28, 771, 265
West South Central	4, 308, 490, 556	3, 964, 164, 459	185, 645, 232	158, 680, 865
Mountain	2, 346, 832, 279	485, 185, 300	1, 776, 761, 592	84, 885, 387
Pacific	11, 414, 720, 430	1, 213, 112, 613	10, 187, 550, 251	14, 057, 566
NEW ENGLAND:				
Maine	762, 111, 856	26, 103, 075	734, 789, 249	1, 219, 532
New Hampshire	680, 606, 529	41, 750, 815	637, 942, 572	913, 142
Vermont and Rhode Island [1]	811, 459, 260	246, 133, 741	565, 170, 559	154, 960
Massachusetts	2, 158, 485, 603	1, 521, 992, 054	627, 209, 266	9, 284, 283
Connecticut	917, 570, 593	636, 871, 077	278, 573, 436	2, 126, 080
MIDDLE ATLANTIC:				
New York	10, 976, 563, 667	5, 675, 774, 272	5, 278, 509, 857	22, 279, 538
New Jersey	2, 990, 678, 924	2, 904, 481, 216	21, 054, 451	5, 143, 257
Pennsylvania	6, 373, 552, 248	5, 184, 145, 263	1, 181, 143, 826	8, 263, 159
EAST NORTH CENTRAL:				
Ohio	4, 868, 953, 749	4, 835, 126, 147	27, 378, 185	6, 449, 417
Indiana	2, 422, 939, 907	2, 288, 282, 386	125, 911, 620	8, 745, 901
Illinois	5, 446, 742, 903	5, 199, 782, 875	231, 897, 360	15, 062, 668
Michigan	3, 532, 622, 960	2, 408, 306, 018	1, 114, 487, 441	9, 829, 501
Wisconsin	1, 834, 783, 776	1, 021, 964, 583	799, 743, 398	13, 075, 795
WEST NORTH CENTRAL:				
Minnesota	995, 182, 260	568, 092, 415	411, 895, 716	15, 194, 129
Iowa	1, 483, 096, 406	659, 149, 140	772, 368, 254	51, 579, 012
Missouri	1, 214, 488, 146	873, 763, 053	293, 718, 415	47, 006, 678
North Dakota	140, 315, 552	134, 643, 313	----------	5, 672, 239
South Dakota	87, 402, 102	53, 971, 843	11, 910, 114	21, 520, 145
Nebraska	561, 795, 147	460, 884, 701	49, 785, 776	51, 124, 670
Kansas	875, 607, 249	782, 957, 304	25, 492, 032	67, 157, 913
SOUTH ATLANTIC:				
Delaware, District of Columbia, and Maryland [1]	2, 231, 616, 742	931, 792, 734	1, 287, 908, 452	11, 915, 556
Virginia	962, 317, 683	616, 866, 932	336, 220, 812	9, 229, 939
West Virginia	1, 442, 442, 782	1, 294, 988, 791	146, 538, 004	915, 987
North Carolina	1, 651, 234, 533	88, 207, 551	1, 556, 029, 963	6, 997, 019
South Carolina	1, 294, 883, 416	39, 639, 561	1, 254, 198, 961	1, 044, 894
Georgia	1, 269, 290, 375	79, 578, 255	1, 188, 391, 210	1, 320, 910
Florida	606, 908, 558	529, 305, 777	42, 081, 266	35, 521, 515
EAST SOUTH CENTRAL:				
Kentucky	681, 946, 841	287, 906, 729	392, 054, 355	1, 985, 757
Tennessee	1, 050, 404, 625	205, 549, 929	839, 638, 789	5, 215, 907
Alabama	1, 209, 646, 423	22, 015, 174	1, 185, 449, 335	2, 181, 914
Mississippi	51, 772, 571	32, 384, 884	----------	19, 387, 687
WEST SOUTH CENTRAL:				
Arkansas	155, 019, 698	36, 294, 654	104, 230, 591	14, 494, 453
Louisiana	1, 171, 951, 428	1, 145, 954, 304	----------	25, 997, 124
Oklahoma	725, 488, 247	669, 019, 568	2, 781, 817	53, 686, 862
Texas	2, 256, 031, 183	2, 112, 895, 933	78, 632, 824	64, 502, 426
MOUNTAIN:				
Montana	635, 520, 305	14, 091, 844	617, 674, 115	3, 754, 346
Idaho	473, 289, 670	76, 190	473, 008, 188	205, 292
Wyoming	74, 596, 866	69, 198, 405	3, 083, 620	2, 314, 841
Colorado	437, 329, 881	244, 764, 478	180, 271, 586	12, 293, 817
Arizona and New Mexico [1]	412, 616, 126	144, 435, 533	206, 898, 493	61, 282, 100
Utah	275, 845, 913	8, 337, 200	265, 649, 671	1, 859, 042
Nevada	37, 633, 518	4, 281, 650	30, 175, 919	3, 175, 949
PACIFIC:				
Washington	2, 544, 766, 928	112, 551, 563	2, 430, 522, 463	1, 692, 902
Oregon	968, 614, 120	83, 785, 964	880, 312, 389	4, 515, 767
California	7, 901, 339, 382	1, 016, 775, 086	6, 876, 715, 399	7, 848, 897

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	TOTAL TO ULTIMATE CONSUMERS [1]					
		Current sold		Revenue from electric service		
	Number of customers	Kilowatt-hours	Average kilowatt-hours per customer	Amount	Average per customer (dollars)	Average per kilowatt-hour (cents)
UNITED STATES	23,858,411	65,895,975,835	2,762	$1,821,105,524	76	2.8
GEOGRAPHIC DIVISIONS:						
New England	2,225,513	4,487,960,970	2,017	155,041,359	70	3.5
Middle Atlantic	6,674,973	18,126,797,887	2,716	540,982,963	81	3.0
East North Central	5,650,468	14,894,151,484	2,636	413,047,157	73	2.8
West North Central	2,326,873	4,754,347,165	2,043	155,135,506	67	3.3
South Atlantic	1,778,544	6,750,375,083	3,795	161,091,901	91	2.4
East South Central	773,372	2,890,544,313	3,738	65,155,900	84	2.3
West South Central	1,234,587	3,463,756,781	2,806	101,466,850	82	2.9
Mountain	633,851	1,958,421,357	3,090	52,301,410	83	2.7
Pacific	2,560,230	8,569,620,795	3,347	176,882,478	69	2.1
NEW ENGLAND:						
Maine	186,564	624,685,947	3,348	12,325,966	66	2.0
New Hampshire	120,549	207,198,479	1,719	7,921,153	66	3.8
Vermont and Rhode Island [2]	270,261	545,301,256	2,018	19,208,505	71	3.5
Massachusetts	1,206,311	2,194,463,957	1,819	82,784,909	69	3.8
Connecticut	441,828	916,311,331	2,074	32,800,826	74	3.6
MIDDLE ATLANTIC:						
New York	3,531,993	9,337,070,538	2,644	285,089,111	81	3.1
New Jersey	1,099,729	2,141,049,523	1,947	85,382,797	78	4.0
Pennsylvania	2,043,251	6,648,677,826	3,254	170,511,055	83	2.6
EAST NORTH CENTRAL:						
Ohio	1,506,211	3,996,804,449	2,654	110,417,014	73	2.8
Indiana	653,156	1,439,079,856	2,203	45,461,516	70	3.2
Illinois	1,808,655	5,241,427,510	2,898	138,551,606	77	2.6
Michigan	1,050,571	2,901,927,459	2,762	76,475,732	73	2.6
Wisconsin	631,875	1,314,912,210	2,081	42,141,289	67	3.2
WEST NORTH CENTRAL:						
Minnesota	484,078	1,001,878,122	2,070	33,151,597	68	3.3
Iowa	460,607	740,899,043	1,609	28,435,996	62	3.8
Missouri	655,799	1,766,383,944	2,693	47,429,634	72	2.7
North Dakota	70,078	79,087,639	1,129	4,748,860	68	6.0
South Dakota	85,058	96,844,941	1,139	5,521,247	65	5.7
Nebraska	236,019	438,224,049	1,857	15,262,056	65	3.5
Kansas	335,234	631,029,427	1,882	20,586,116	61	3.3
SOUTH ATLANTIC:						
Delaware, District of Columbia, Maryland, and West Virginia [2]	691,613	2,464,156,007	3,563	58,325,072	84	2.4
Virginia	267,637	814,386,516	3,043	21,812,153	81	2.7
North Carolina	262,768	1,288,397,395	4,903	25,029,898	95	1.9
South Carolina	107,172	763,879,014	7,128	13,182,164	123	1.7
Georgia	211,650	958,741,517	4,530	21,978,286	104	2.3
Florida	237,704	460,814,634	1,939	20,764,328	87	4.5
EAST SOUTH CENTRAL:						
Kentucky	272,507	626,733,662	2,300	19,715,802	72	3.1
Tennessee	238,022	1,054,270,691	4,429	20,364,368	86	1.9
Alabama	171,079	1,010,552,094	5,907	17,527,617	102	1.7
Mississippi	91,764	198,987,866	2,168	7,548,113	82	3.8
WEST SOUTH CENTRAL:						
Arkansas	115,977	283,021,562	2,440	9,356,358	81	3.3
Louisiana	191,219	639,768,883	3,346	17,052,677	89	2.7
Oklahoma	267,816	610,264,903	2,279	19,781,187	74	3.2
Texas	659,575	1,930,701,433	2,927	55,276,628	84	2.9
MOUNTAIN:						
Montana and Utah [2]	194,859	901,459,582	4,626	17,800,718	91	2.0
Idaho	77,735	296,091,257	3,809	6,202,177	80	2.1
Wyoming	34,669	62,070,419	1,790	2,819,647	81	4.5
Colorado	207,565	345,607,996	1,665	14,154,123	68	4.1
Arizona and New Mexico [2]	98,660	266,986,761	2,706	8,951,707	91	3.4
Nevada	20,363	86,205,342	4,233	2,373,038	117	2.8
PACIFIC:						
Washington	417,471	1,835,963,325	4,398	28,904,257	69	1.6
Oregon	237,313	742,723,495	3,130	15,711,644	66	2.1
California	1,905,446	5,990,933,975	3,144	132,266,577	69	2.2

For footnotes, see p. 43.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	FARM SERVICE (ALL USES)					
		Current sold		Revenue from electric service		
	Number of customers	Kilowatt-hours	Average kilowatt-hours per customer	Amount	Average per customer (dollars)	Average per kilowatt-hour (cents)
UNITED STATES	613, 753	1, 504, 257, 106	2, 451	$42, 773, 826	70	2.8
GEOGRAPHIC DIVISIONS:						
New England	40, 321	26, 731, 155	663	1, 680, 334	42	6.3
Middle Atlantic	106, 292	80, 131, 973	754	5, 090, 967	48	6.4
East North Central	190, 342	138, 503, 155	728	8, 958, 614	47	6.5
West North Central	54, 522	43, 463, 857	797	3, 608, 114	66	8.3
South Atlantic	43, 481	40, 530, 849	932	2, 229, 448	51	5.5
East South Central	20, 514	17, 413, 499	849	1, 135, 576	55	6.5
West South Central	12, 948	31, 344, 441	2, 421	1, 239, 326	96	4.0
Mountain	32, 893	74, 979, 089	2, 279	2, 186, 224	66	2.9
Pacific	112, 440	1, 051, 159, 088	9, 349	16, 645, 223	148	1.6
NEW ENGLAND:						
Maine	17, 190	9, 735, 632	566	647, 294	38	6.6
New Hampshire	7, 142	4, 409, 591	617	317, 053	44	7.2
Vermont and Rhode Island [2]	5, 090	4, 201, 281	825	255, 986	50	6.1
Massachusetts	8, 782	6, 830, 493	778	363, 072	41	5.3
Connecticut	2, 117	1, 554, 158	734	96, 929	46	6.2
MIDDLE ATLANTIC:						
New York	54, 125	40, 724, 251	752	2, 586, 894	48	6.4
New Jersey	14, 627	10, 723, 655	733	750, 018	51	7.0
Pennsylvania	37, 540	28, 684, 067	764	1, 754, 055	47	6.1
EAST NORTH CENTRAL:						
Ohio	57, 572	38, 351, 134	666	2, 412, 748	42	6.3
Indiana	32, 395	19, 860, 262	613	1, 403, 048	43	7.1
Illinois	26, 101	22, 420, 035	859	1, 570, 112	60	7.0
Michigan	36, 079	26, 173, 374	725	1, 194, 729	33	4.6
Wisconsin	38, 195	31, 698, 350	830	2, 377, 977	62	7.5
WEST NORTH CENTRAL:						
Minnesota	9, 874	8, 154, 473	826	735, 088	74	9.0
Iowa	18, 438	13, 056, 384	708	1, 313, 120	71	10.1
Missouri	10, 720	7, 408, 217	691	490, 932	46	6.6
North Dakota	392	324, 274	827	29, 655	76	9.1
South Dakota	1, 230	829, 900	675	91, 488	74	11.0
Nebraska	5, 770	4, 540, 501	787	425, 256	74	9.4
Kansas	8, 098	9, 150, 108	1, 130	522, 575	65	5.7
SOUTH ATLANTIC:						
Delaware, District of Columbia, Maryland, and West Virginia [2]	8, 778	7, 329, 312	835	420, 195	48	5.7
Virginia	12, 654	14, 203, 660	1, 122	744, 152	59	5.2
North Carolina	8, 403	5, 557, 963	661	311, 370	37	5.6
South Carolina	3, 191	2, 083, 857	653	113, 789	36	5.5
Georgia	6, 470	5, 128, 721	793	313, 881	49	6.1
Florida	3, 985	6, 227, 336	1, 563	326, 061	82	5.2
EAST SOUTH CENTRAL:						
Kentucky	(3)	(3)	(3)	(3)	(3)	(3)
Tennessee						
Alabama						
Mississippi						
WEST SOUTH CENTRAL:						
Arkansas	1, 347	1, 203, 403	893	91, 922	68	7.6
Louisiana	2, 171	7, 599, 199	3, 500	253, 397	117	3.3
Oklahoma	3, 101	2, 525, 436	814	202, 304	65	8.0
Texas	6, 329	20, 016, 403	3, 163	691, 703	109	3.5
MOUNTAIN:						
Montana and Utah [2]	(3)	(3)	(3)	(3)	(3)	(3)
Idaho						
Wyoming						
Colorado						
Arizona and New Mexico [2]						
Nevada						
PACIFIC:						
Washington	(4)	(4)	(4)	(4)	(4)	(4)
Oregon	[4] 51, 308	[4] 100, 485, 793	[4] 1, 958	[4] 2, 588, 617	[4] 50	[4] 2.6
California	61, 132	950, 673, 295	15, 551	14, 056, 606	230	1.5

For footnotes see p. 43.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	DOMESTIC SERVICE					
		Current sold		Revenue from electric service		
	Number of customers	Kilowatt-hours	Average kilowatt-hours per customer	Amount	Average per customer (dollars)	Average per kilowatt-hour (cents)
UNITED STATES	19,285,560	11,790,139,511	611	$649,764,750	34	5.5
GEOGRAPHIC DIVISIONS:						
New England	1,846,408	1,018,599,909	552	62,068,256	34	6.1
Middle Atlantic	5,426,456	2,941,969,660	542	184,734,611	34	6.3
East North Central	4,606,737	2,854,607,790	620	148,707,155	32	5.2
West North Central	1,870,141	1,119,104,614	598	63,093,732	34	5.6
South Atlantic	1,450,253	998,436,263	688	55,255,142	38	5.5
East South Central	602,211	354,666,271	589	21,405,330	36	6.0
West South Central	962,744	532,273,196	553	34,680,407	36	6.5
Mountain	489,441	336,370,267	687	17,876,711	37	5.3
Pacific	2,031,169	1,634,111,541	805	61,943,406	30	3.8
NEW ENGLAND:						
Maine	135,600	68,716,006	507	4,417,177	33	6.4
New Hampshire	92,172	42,359,040	460	3,076,435	33	7.3
Vermont and Rhode Island [2]	222,596	104,579,415	470	7,302,591	33	7.0
Massachusetts	1,007,729	527,081,388	523	32,174,977	32	6.1
Connecticut	388,311	275,864,060	710	15,097,076	39	5.5
MIDDLE ATLANTIC:						
New York	2,853,701	1,502,034,515	526	93,583,065	33	6.2
New Jersey	880,580	442,085,965	502	32,427,242	37	7.3
Pennsylvania	1,692,175	997,849,180	590	58,724,304	35	5.9
EAST NORTH CENTRAL:						
Ohio	1,238,028	753,228,338	608	40,317,886	33	5.4
Indiana	519,876	278,106,671	535	16,598,956	32	6.0
Illinois	1,507,926	947,687,318	628	50,386,673	33	5.3
Michigan	854,556	591,170,249	692	25,954,678	30	4.4
Wisconsin	486,351	284,415,214	585	15,448,962	32	5.4
WEST NORTH CENTRAL:						
Minnesota	388,664	238,205,327	613	13,519,026	35	5.7
Iowa	372,573	195,476,293	525	12,947,400	35	6.6
Missouri	535,615	348,759,483	651	16,920,469	32	4.9
North Dakota	50,044	29,481,771	589	2,063,928	41	7.0
South Dakota	61,855	33,957,974	549	2,419,473	39	7.1
Nebraska	190,667	116,850,364	613	6,621,029	35	5.7
Kansas	270,723	156,373,402	578	8,602,407	32	5.5
SOUTH ATLANTIC:						
Delaware, District of Columbia, Maryland, and West Virginia [2]	582,475	392,067,807	673	19,624,186	34	5.0
Virginia	208,438	142,978,552	686	8,053,967	39	5.6
North Carolina	221,953	146,564,996	660	8,517,623	38	5.8
South Carolina	87,132	62,209,650	714	3,482,492	40	5.6
Georgia	160,024	119,835,259	749	6,519,844	41	5.4
Florida	190,231	134,779,999	709	9,057,030	48	6.7
EAST SOUTH CENTRAL:						
Kentucky	220,404	111,600,372	506	6,940,586	31	6.2
Tennessee	187,994	111,787,845	595	6,933,628	37	6.2
Alabama	126,738	88,066,898	695	4,697,357	37	5.3
Mississippi	67,075	43,211,156	644	2,833,759	42	6.6
WEST SOUTH CENTRAL:						
Arkansas	88,166	43,960,224	499	3,211,930	36	7.3
Louisiana	154,559	82,361,581	533	6,254,089	40	7.6
Oklahoma	203,737	111,453,090	547	6,974,060	34	6.3
Texas	516,282	294,498,301	570	18,240,328	35	6.2
MOUNTAIN:						
Montana and Utah [2]	155,134	112,904,715	728	5,403,348	35	4.8
Idaho	51,771	60,422,256	1,167	2,163,542	42	3.6
Wyoming	27,427	16,784,607	612	1,133,957	41	6.8
Colorado	162,368	83,771,839	516	5,150,676	32	6.1
Arizona and New Mexico [2]	77,217	46,481,376	602	3,232,129	42	7.0
Nevada	15,524	16,005,474	1,031	793,059	51	5.0
PACIFIC:						
Washington	319,824	387,489,967	1,212	10,574,621	33	2.7
Oregon	186,810	187,231,493	1,002	6,015,669	32	3.2
California	1,524,535	1,059,390,081	695	45,353,116	30	4.3

For footnotes, see p. 43.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	COMMERCIAL SERVICE					
	Small light and power (retail)					
		Current sold		Revenue from electric service		
	Number of customers	Kilowatt-hours	Average kw.-hrs. per customer	Amount	Average per customer (dollars)	Average per kw.-hr. (cents)
UNITED STATES	3,527,794	12,059,463,977	3,418	$491,852,492	139	4.1
GEOGRAPHIC DIVISIONS:						
New England	292,313	685,643,044	2,346	37,347,580	128	5.4
Middle Atlantic	1,002,278	2,503,491,405	2,498	133,327,574	133	5.3
East North Central	785,783	2,714,382,057	3,454	111,653,078	142	4.1
West North Central	356,157	1,159,362,735	3,255	48,831,538	137	4.2
South Atlantic	264,320	1,003,155,368	3,795	40,095,688	152	4.0
East South Central	136,750	370,823,813	2,712	17,407,478	127	4.7
West South Central	224,661	677,218,217	3,014	30,440,733	135	4.5
Mountain	96,494	304,112,578	3,152	14,577,087	151	4.8
Pacific	369,038	2,641,274,760	7,157	58,171,736	158	2.2
NEW ENGLAND:						
Maine	27,868	56,921,684	2,043	2,702,128	97	4.7
New Hampshire	17,455	28,287,212	1,621	1,776,275	102	6.3
Vermont and Rhode Island [2]	36,337	86,259,660	2,374	4,543,590	125	5.3
Massachusetts	168,569	381,348,299	2,262	21,442,029	127	5.6
Connecticut	42,084	132,826,189	3,156	6,883,558	164	5.2
MIDDLE ATLANTIC:						
New York	568,037	1,476,315,726	2,599	77,242,781	136	5.2
New Jersey	165,261	328,107,226	1,985	21,591,576	131	6.6
Pennsylvania	268,980	699,068,453	2,599	34,493,217	128	4.9
EAST NORTH CENTRAL:						
Ohio	192,428	707,899,908	3,679	27,309,689	142	3.9
Indiana	87,981	306,259,815	3,481	12,040,296	137	3.9
Illinois	253,867	816,727,527	3,217	35,548,615	140	4.4
Michigan	155,676	644,248,807	4,138	25,128,822	161	3.9
Wisconsin	95,831	239,246,000	2,497	11,625,656	121	4.9
WEST NORTH CENTRAL:						
Minnesota	66,800	208,756,593	3,125	8,892,048	133	4.3
Iowa	64,066	203,273,266	3,173	8,328,085	130	4.1
Missouri	104,255	433,021,045	4,153	17,084,000	164	3.9
North Dakota	16,949	27,864,043	1,644	1,733,131	102	6.2
South Dakota	18,207	31,004,898	1,703	1,790,985	98	5.8
Nebraska	35,780	123,640,546	3,456	5,043,793	141	4.1
Kansas	50,100	131,802,344	2,631	5,959,496	119	4.5
SOUTH ATLANTIC:						
Delaware, District of Columbia, Maryland, and West Virginia [2]	94,649	376,763,793	3,981	14,191,041	150	3.8
Virginia	41,767	152,843,929	3,659	5,908,379	141	3.9
North Carolina	28,046	101,643,936	3,624	3,855,871	137	3.8
South Carolina	15,420	76,535,084	4,963	2,257,670	146	2.9
Georgia	43,638	161,049,877	3,691	6,809,341	156	4.2
Florida	40,800	134,318,749	3,292	7,073,386	173	5.3
EAST SOUTH CENTRAL:						
Kentucky	39,885	98,455,312	2,468	4,743,853	119	4.8
Tennessee	43,329	136,806,785	3,157	6,331,228	146	4.6
Alabama	32,213	89,469,381	2,777	3,790,364	118	4.2
Mississippi	21,323	46,092,335	2,162	2,542,033	119	5.5
WEST SOUTH CENTRAL:						
Arkansas	23,108	50,129,624	2,169	2,748,324	119	5.5
Louisiana	31,696	80,369,925	2,536	4,520,271	143	5.6
Oklahoma	46,557	89,136,187	1,915	4,810,011	103	5.4
Texas	123,300	457,582,481	3,711	18,362,127	149	4.0
MOUNTAIN:						
Montana and Utah [2]	26,525	93,813,148	3,537	4,182,846	158	4.5
Idaho	12,266	51,359,170	4,187	1,823,201	149	3.5
Wyoming	5,608	13,855,019	2,471	819,629	146	5.9
Colorado	30,675	79,403,110	2,589	4,162,968	136	5.2
Arizona and New Mexico [2]	18,316	48,219,831	2,633	2,896,372	158	6.0
Nevada	3,104	17,462,300	5,626	692,071	223	4.0
PACIFIC:						
Washington	55,016	482,897,118	8,777	9,409,759	171	2.0
Oregon	33,760	231,834,043	6,867	5,753,208	170	2.5
California	280,262	1,926,543,599	6,874	43,008,769	153	2.2

For footnotes, see p. 43.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	COMMERCIAL SERVICE—continued					
	Large light and power (wholesale)					
	Number of customers	Current sold		Revenue from electric service		
		Kilowatt-hours	Average kw.-hrs. per customer	Amount	Average per customer (dollars)	Average per kw.-hr. (cents)
UNITED STATES	379,402	32,380,076,220	85,345	$483,390,649	1,274	1.5
GEOGRAPHIC DIVISIONS:						
New England	43,371	2,340,427,359	53,963	41,059,073	947	1.8
Middle Atlantic	126,948	10,281,037,183	80,986	166,447,518	1,311	1.6
East North Central	53,496	6,754,168,165	126,256	107,208,093	2,004	1.6
West North Central	40,865	1,829,158,903	44,761	27,740,939	679	1.5
South Atlantic	15,275	4,111,300,352	269,152	51,562,059	3,376	1.3
East South Central	11,309	1,892,893,835	167,379	20,619,512	1,823	1.1
West South Central	28,480	1,839,160,531	64,577	28,715,928	1,008	1.6
Mountain	14,063	1,067,815,691	75,931	14,097,558	1,002	1.3
Pacific	45,595	2,264,114,201	49,657	25,939,969	569	1.1
NEW ENGLAND:						
Maine	5,181	449,868,719	86,830	3,641,971	703	.8
New Hampshire	3,332	112,627,587	33,802	1,938,382	582	1.7
Vermont and Rhode Island [2]	5,679	290,332,798	51,124	5,454,040	960	1.9
Massachusetts	20,075	1,085,130,438	54,054	21,882,181	1,090	2.0
Connecticut	9,104	402,467,817	44,208	8,142,499	894	2.0
MIDDLE ATLANTIC:						
New York	50,451	5,316,662,221	105,383	84,628,830	1,677	1.6
New Jersey	37,861	1,069,484,210	28,248	22,468,355	593	2.1
Pennsylvania	38,636	3,894,890,752	100,810	59,350,333	1,536	1.5
EAST NORTH CENTRAL:						
Ohio	14,321	1,956,932,170	136,648	30,587,644	2,136	1.6
Indiana	10,704	625,092,683	58,398	11,222,464	1,048	1.8
Illinois	15,632	2,153,890,393	137,787	36,571,488	2,340	1.7
Michigan	3,279	1,353,706,149	412,841	18,875,047	5,756	1.4
Wisconsin	9,560	664,546,770	69,513	9,951,450	1,041	1.5
WEST NORTH CENTRAL:						
Minnesota	17,673	444,721,226	25,164	7,484,281	423	1.7
Iowa	4,378	273,850,903	62,552	3,983,136	910	1.5
Missouri	4,493	635,217,089	141,379	8,517,453	1,896	1.3
North Dakota	2,304	13,470,830	5,847	557,147	242	4.1
South Dakota	3,417	23,373,130	6,840	790,844	231	3.4
Nebraska	3,274	143,194,457	43,737	2,134,749	652	1.5
Kansas	5,326	295,331,268	55,451	4,273,329	802	1.4
SOUTH ATLANTIC:						
Delaware, District of Columbia, Maryland, and West Virginia [2]	4,619	1,350,773,457	292,439	18,844,214	4,080	1.4
Virginia	4,082	439,979,121	107,785	6,086,876	1,491	1.4
North Carolina	3,387	991,684,054	292,791	11,022,614	3,254	1.1
South Carolina	1,011	597,807,504	591,303	6,667,028	6,594	1.1
Georgia	965	595,729,310	617,336	6,865,232	7,114	1.2
Florida	1,211	135,326,906	111,748	2,076,095	1,714	1.5
EAST SOUTH CENTRAL:						
Kentucky						
Tennessee	(3)	(3)	(3)	(3)	(3)	(3)
Alabama						
Mississippi						
WEST SOUTH CENTRAL:						
Arkansas	2,227	161,898,488	72,698	2,707,306	1,216	1.7
Louisiana	1,832	394,986,054	215,604	4,686,357	2,558	1.2
Oklahoma	13,497	350,798,420	25,991	6,521,204	483	1.9
Texas	10,924	931,477,569	85,269	14,801,061	1,355	1.6
MOUNTAIN:						
Montana and Utah [2]						
Idaho						
Wyoming	(3)	(3)	(3)	(3)	(3)	(3)
Colorado						
Arizona and New Mexico [2]						
Nevada						
PACIFIC:						
Washington	4,464	705,682,480	158,083	4,631,191	1,037	.7
Oregon	2,918	218,860,480	75,004	2,064,452	707	.9
California	38,213	1,339,571,241	35,055	19,244,326	504	1.4

For footnotes, see p. 43.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	MUNICIPAL STREET LIGHTING SERVICE					
		Current sold		Revenue from electric service		
	Number of customers	Kilowatt-hours	Average kw.-hrs. per customer	Amount	Average per customer (dollars)	Average per kw.-hr. (cents)
UNITED STATES	29,832	2,235,668,364	74,942	$92,010,645	3,084	4.1
GEOGRAPHIC DIVISIONS:						
New England	1,486	186,829,162	125,726	9,872,799	6,644	5.3
Middle Atlantic	6,863	579,616,855	84,455	31,438,039	4,581	5.4
East North Central	6,205	621,101,198	100,097	18,605,469	2,998	3.0
West North Central	3,688	184,575,720	50,048	7,357,258	1,995	4.0
South Atlantic	3,879	172,944,878	44,585	8,289,358	2,137	4.8
East South Central	1,002	62,351,442	62,227	2,692,714	2,687	4.3
West South Central	4,119	124,636,964	30,259	3,756,560	912	3.0
Mountain	779	51,473,123	66,076	2,136,835	2,743	4.2
Pacific	1,811	252,139,022	139,226	7,861,613	4,341	3.1
NEW ENGLAND:						
Maine	356	13,294,902	37,345	705,809	1,983	5.3
New Hampshire	213	10,145,244	47,630	659,643	3,097	6.5
Vermont and Rhode Island [2]	255	19,574,929	76,764	1,018,017	3,992	5.2
Massachusetts	495	110,285,558	222,799	5,711,065	11,538	5.2
Connecticut	167	33,528,529	200,770	1,778,265	10,648	5.3
MIDDLE ATLANTIC:						
New York	1,696	289,846,577	170,900	16,785,482	9,897	5.8
New Jersey	662	92,376,672	139,542	6,041,338	9,126	6.5
Pennsylvania	4,505	197,393,606	43,817	8,611,219	1,911	4.4
EAST NORTH CENTRAL:						
Ohio	1,515	134,007,430	88,454	5,921,061	3,908	4.4
Indiana	1,941	77,150,292	39,748	2,706,446	1,394	3.5
Illinois	1,150	177,137,198	154,032	3,887,196	3,380	2.2
Michigan	782	175,187,596	224,025	3,971,859	5,079	2.3
Wisconsin	817	57,618,682	70,525	2,118,907	2,594	3.7
WEST NORTH CENTRAL:						
Minnesota	702	46,490,560	66,226	1,781,394	2,538	3.8
Iowa	839	31,863,782	37,978	1,484,092	1,769	4.7
Missouri	576	59,102,212	102,608	1,843,127	3,200	3.1
North Dakota	329	4,499,605	13,677	276,599	841	6.1
South Dakota	284	6,492,498	22,861	394,219	1,388	6.1
Nebraska	429	17,048,614	39,740	711,081	1,658	4.2
Kansas	529	19,078,449	36,065	866,746	1,638	4.5
SOUTH ATLANTIC:						
Delaware, District of Columbia, Maryland, and West Virginia [2]	494	57,448,644	116,293	3,031,888	6,137	5.3
Virginia	275	13,563,328	49,321	648,515	2,358	4.8
North Carolina	937	33,513,255	35,767	1,195,943	1,276	3.6
South Carolina	352	12,823,301	36,430	537,879	1,528	4.2
Georgia	512	20,362,557	39,771	911,740	1,781	4.5
Florida	1,309	35,233,793	26,917	1,963,393	1,500	5.6
EAST SOUTH CENTRAL:						
Kentucky	296	25,205,342	85,153	1,007,552	3,404	4.0
Tennessee	200	14,681,670	73,408	679,027	3,395	4.6
Alabama	[5] 506	[5] 22,464,430	[5] 44,396	[5] 1,006,135	[5] 1,988	[5] 4.5
Mississippi	(5)	(5)	(5)	(5)	(5)	(5)
WEST SOUTH CENTRAL:						
Arkansas	1,010	10,672,891	10,567	419,505	415	3.9
Louisiana	887	27,126,717	30,583	892,944	1,007	3.3
Oklahoma	341	16,750,377	49,121	687,223	2,015	4.1
Texas	1,881	70,086,979	37,260	1,756,888	934	2.5
MOUNTAIN:						
Montana and Utah [2]	290	19,564,744	67,465	664,552	2,292	3.4
Idaho	126	5,153,227	40,899	218,892	1,737	4.2
Wyoming	47	3,327,515	70,798	158,398	3,370	4.8
Colorado	180	16,109,446	89,497	795,843	4,421	4.9
Arizona and New Mexico [2]	103	5,337,191	51,817	221,126	2,147	4.1
Nevada	33	1,981,000	60,030	78,024	2,364	3.9

For footnotes, see p. 43.

TABLE 24.—SALES TO ULTIMATE CONSUMERS—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, BY CLASS OF SERVICE, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	MUNICIPAL STREET LIGHTING SERVICE					
		Current sold		Revenue from electric service		
	Number of customers	Kilowatt-hours	Average kw.-hrs. per customer	Amount	Average per customer (dollars)	Average per kw.-hr. (cents)
PACIFIC:						
Washington	325	42,838,398	131,810	$1,019,951	3,138	2.4
Oregon	223	21,649,340	97,082	711,653	3,191	3.3
California	1,263	187,651,284	148,576	6,130,009	4,854	3.3

[1] Data for "Electrified-steam railway division", "Street and interurban railways", and "Other service," are included in items in the "Total" column, but not elsewhere in the table.
[2] Combined to avoid disclosing the operations of individual establishments.
[3] Statistics for States cannot be shown without disclosing data for individual establishments.
[4] Washington included with Oregon to avoid disclosing data for individual establishments.
[5] Mississippi included with Alabama to avoid disclosing data for individual establishments.

TABLE 25.—TRANSMISSION SYSTEMS—ESTABLISHMENTS REPORTING, MILES OF CIRCUIT, BY INDIVIDUAL VOLTAGE, COMMERCIAL ESTABLISHMENTS, BY GEOGRAPHIC DIVISIONS: 1932

DIVISION	Establishments reporting transmission systems	MILES OF CIRCUIT BY INDIVIDUAL VOLTAGE				
		Total [1]	6,600	11,000	13,200	22,000
UNITED STATES	830	251,408	29,552	17,231	31,835	20,921
GEOGRAPHIC DIVISIONS:						
New England	108	9,898	561	822	1,227	940
Middle Atlantic	83	29,012	1,555	3,479	3,295	5,070
East North Central	157	49,766	7,211	3,495	3,205	2,963
West North Central	148	51,645	12,996	3,029	9,731	4,847
South Atlantic	84	29,039	2,759	1,275	3,802	2,177
East South Central	51	14,128	785	413	2,326	730
West South Central	56	31,130	934	1,951	6,405	2,640
Mountain	89	14,946	1,053	1,345	1,093	689
Pacific	54	21,844	1,698	1,422	751	865

DIVISION	MILES OF CIRCUIT BY INDIVIDUAL VOLTAGE					
	33,000	44,000	60,000	66,000	110,000	132,000
UNITED STATES	42,799	16,342	9,487	29,708	17,079	8,254
GEOGRAPHIC DIVISIONS:						
New England	1,884	456	----------	1,764	873	----------
Middle Atlantic	4,003	1,286	782	3,019	3,619	611
East North Central	12,143	961	847	5,280	581	4,273
West North Central	12,757	322		2,438	421	825
South Atlantic	2,353	4,109	490	5,009	4,155	984
East South Central	1,654	3,609	----------	973	2,685	178
West South Central	5,644	5,539	2,848	6,995	1,172	583
Mountain	1,124		747	263	1,101	800
Pacific	1,237		3,773	3,967	2,472	

[1] Data for 1,903 miles of circuit having 220,000 volts and 26,297 miles of "All other" voltage, are included in the items in the "Total" column, but not elsewhere in the table (see table 17, footnote 2).

CHAPTER III.—FUEL-BURNING AND HYDROELECTRIC GENERATING STATIONS

Data for hydroelectric plants were first shown separately at the census for 1912. For that year and for 1917 and 1922, only those establishments which reported water power of 1,000 horsepower or more (including some which reported both water and other power), were treated as hydroelectric. Data necessarily included a small amount of steam power, since establishments combining steam and moderately large water-power development were included, while, on the other hand, smaller water-power plants were excluded.

Comparison with census for 1927 (for 1932 data, see table 29).—In the census for 1927 data for establishments reporting water power were presented in several groupings—those reporting water power of 1,000 horsepower or more; those reporting 50 percent or more of their current generated by means of water power; all establishments reporting water power; and establishments reporting water power only. These same groupings are also used in the present report. There is obviously considerable overlapping in some of these groups (table 29); however, in tables 26 and 27, separate figures are given for generators driven by power derived from fuel and for those driven by water power, and table 28 shows current generated by fuel-burning and by hydroelectric equipment, regardless of the classification of the establishments themselves. All of these groupings show increases in most items in the 1927–32 period. "Establishments reporting 50 percent or more current generated by water power" show increases in the following items: Horsepower of hydroturbines, 42.5 percent; rated generator capacity, 57.2 percent; current generated, 15.5 percent; sales from electric service, 28 percent, and number of customers served, 31.1 percent.

Combination of hydroelectric and fuel-burning plants (table 29).—It has been found that combining water power and fuel-burning plants in single systems has decided economic advantages. For this reason, it is noted that "Establishments which report water power only" represent only 8.5 percent of the total number of establishments and of prime-mover horsepower, 30 percent of the total hydraulic horsepower, and 12 percent of the current generated, for all establishments. On the other hand, "Establishments reporting 1,000 horsepower or more" represent 8.6 of the total number of establishments; 54.1 percent of the total prime-mover horsepower; 99.4 percent of the total hydraulic horsepower, and 56.6 percent of the total current generated by all establishments, while "Establishments reporting 50 percent or more current generated by water power" represent 14.1 percent of the total number of establishments; 38.8 percent of the total prime-mover horsepower; 95.7 percent of the total hydraulic horsepower, and 42.6 percent of the total current generated by all establishments. It is interesting to note that establishments using water power report 42.2 percent of the rated capacity of steam turbines in the industry.

Comparison with earlier census years (table 26).—A comparison with earlier census years shows that while there have been marked increases in the kilowatt-rating of generators driven by water power, this group's proportion of the total capacity decreased in all census periods with the exception of the 1927–32.

Comparison by regions (tables 27 and 28).—Only in the Mountain and the Pacific geographic divisions does the rated capacity of generators driven by water power constitute more than 50 percent of the total; as to individual States, this statement applies to Maine and New Hampshire, in the New England group; North Carolina, South Carolina, and Georgia, in the South Atlantic group; Alabama, in the East South Central group; Montana, Idaho, Utah, and Nevada, in the Mountain group, and Washington, Oregon, and California, in the Pacific group. The Pacific group is by far the predominant water-power division, reporting over 30 percent of the total current generated by hydraulic equipment in the United States. California is the leading State. However, even where water power is abundant, experience shows that it is generally supplemented by steam. Of California's output 13 percent came from fuel (table 28). North Dakota, Mississippi, and Louisiana show no hydroelectric equipment.

On the whole, the first cost of hydro plants is relatively higher than that of steam plants, but the operating cost is lower. Where both kinds of power are available, it is therefore of advantage to obtain maximum output from the water-power plant, using steam to make up the balance. This practice is reflected in tables 27 and 28. With some exceptions, the output from the hydro plants constitutes a larger percentage of the total output than might be expected from the proportion of the total capacity; while five geographic divisions show over 50 percent of the output of current was generated by hydroelectric equipment, only two geographic divisions show hydro generator capacity in excess of 50 percent of the total. This tendency is shown in several States. For example, Iowa shows only 26.1 percent of its generator capacity as being hydro, yet reports 52.1 percent of its total output as being generated by hydroelectric equipment. The following statement gives the number of kilowatt-hours generated per kilowatt of capacity for fuel-burning and hydroelectric plants:

ITEM	Fuel	Hydro
Rated generator capacity (kilowatts)	25,083,052	9,539,502
Current generated (kilowatt-hours)	46,090,016,902	33,567,449,749
Kilowatt-hours generated per kilowatt of capacity:		
Per annum	1,837	3,519
Per diem	5.0	9.6

TABLE 26.—GENERATOR CAPACITY OF FUEL-BURNING AND OF HYDROELECTRIC EQUIPMENT, ALL ESTABLISHMENTS: 1917 TO 1932

CENSUS YEAR	RATED GENERATOR CAPACITY (KILOWATTS)			PERCENT OF TOTAL	
	Total	Fuel	Hydro	Fuel	Hydro
1932	34,622,554	25,083,052	9,539,502	72.4	27.6
1927	25,811,305	18,961,793	6,849,512	73.5	26.5
1922	14,313,438	9,962,781	4,350,657	69.6	30.4
1917	8,994,407	6,208,510	2,785,897	69.0	31.0

TABLE 27.—GENERATOR CAPACITY OF FUEL-BURNING AND OF HYDROELECTRIC EQUIPMENT, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES, 1932

DIVISION AND STATE	RATED GENERATOR CAPACITY (KILOWATTS)			PERCENT OF TOTAL	
	Total	Fuel	Hydro	Fuel	Hydro
UNITED STATES	34,622,554	25,083,052	9,539,502	72.4	27.6
GEOGRAPHIC DIVISIONS:					
New England	2,639,387	1,782,187	857,200	67.5	32.5
Middle Atlantic	8,271,328	6,801,862	1,469,466	82.2	17.8
East North Central	8,246,758	7,550,910	695,848	91.6	8.4
West North Central	2,615,095	2,154,338	460,757	82.4	17.6
South Atlantic	4,290,917	2,369,945	1,920,972	55.2	44.8
East South Central	1,480,254	758,276	721,978	51.2	48.8
West South Central	1,792,286	1,702,441	89,845	95.0	5.0
Mountain	1,157,200	409,383	747,817	35.4	64.6
Pacific	4,129,329	1,553,710	2,575,619	37.6	62.4
NEW ENGLAND:					
Maine	265,153	55,519	209,634	20.9	79.1
New Hampshire	283,321	63,895	219,426	22.6	77.4
Vermont and Rhode Island [1]	432,093	255,094	176,999	59.0	41.0
Massachusetts	1,156,134	987,609	168,525	85.4	14.6
Connecticut	502,686	420,070	82,616	83.6	16.4
MIDDLE ATLANTIC:					
New York	4,577,631	3,443,314	1,134,317	75.2	24.8
New Jersey	1,062,445	1,057,075	5,370	99.5	0.5
Pennsylvania	2,631,252	2,301,473	329,779	87.5	12.5
EAST NORTH CENTRAL:					
Ohio	2,145,614	2,130,029	15,585	99.3	0.7
Indiana	987,882	948,753	39,129	96.0	4.0
Illinois	2,605,826	2,561,136	44,690	98.3	1.7
Michigan	1,657,436	1,307,759	349,677	78.9	21.1
Wisconsin	850,000	603,233	246,767	71.0	29.0
WEST NORTH CENTRAL:					
Minnesota	477,220	352,424	124,796	73.8	26.2
Iowa	600,369	443,907	156,462	73.9	26.1
Missouri	716,502	564,264	152,238	78.8	21.2
North Dakota	70,400	70,400	----------	100.0	-------
South Dakota	66,929	62,949	3,980	94.1	5.9
Nebraska	252,186	238,482	13,704	94.6	5.4
Kansas	431,489	421,912	9,577	97.8	2.2
SOUTH ATLANTIC:					
Delaware, District of Columbia, and Maryland [1]	857,067	585,767	271,300	68.3	31.7
Virginia	409,468	314,366	95,102	76.8	23.2
West Virginia	538,825	482,398	56,427	89.5	10.5
North Carolina	1,004,687	353,663	651,024	35.2	64.8
South Carolina	642,856	148,081	494,775	23.0	77.0
Georgia	474,962	137,068	337,894	28.9	71.1
Florida	363,052	348,602	14,450	96.0	4.0
EAST SOUTH CENTRAL:					
Kentucky	339,771	234,446	105,325	69.0	31.0
Tennessee	425,541	214,758	210,783	50.5	49.5
Alabama	649,273	243,403	405,870	37.5	62.5
Mississippi	65,669	65,669	----------	100.0	-------
WEST SOUTH CENTRAL:					
Arkansas	152,808	86,102	66,706	56.3	43.7
Louisiana	328,624	328,624	----------	100.0	-------
Oklahoma	343,210	341,286	1,924	99.4	0.6
Texas	967,644	946,429	21,215	97.8	2.2
MOUNTAIN:					
Montana	318,313	19,353	298,960	6.1	93.9
Idaho	208,007	2,922	205,085	1.4	98.6
Wyoming	36,272	34,352	1,920	94.7	5.3
Colorado	221,246	158,773	62,473	71.8	28.2
Arizona and New Mexico [1]	223,085	144,849	78,236	64.9	35.1
Utah	137,199	45,343	91,856	33.0	67.0
Nevada	13,078	3,791	9,287	29.0	71.0
PACIFIC:					
Washington	882,541	226,862	655,679	25.7	74.3
Oregon	382,429	189,398	193,031	49.5	50.5
California	2,864,359	1,137,450	1,726,909	39.7	60.3

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 28.—CURRENT GENERATED BY FUEL-BURNING AND BY HYDROELECTRIC EQUIPMENT, ALL ESTABLISHMENTS, BY DIVISIONS AND STATES, 1932

DIVISION AND STATE	CURRENT GENERATED (KILOWATT-HOURS)			PERCENT OF TOTAL	
	Total	Fuel	Hydro	Fuel	Hydro
UNITED STATES	79,657,466,651	46,090,016,902	33,567,449,749	57.9	42.1
GEOGRAPHIC DIVISIONS:					
New England	5,330,233,841	2,486,548,759	2,843,685,082	46.6	53.4
Middle Atlantic	20,340,794,839	13,860,086,705	6,480,708,134	68.1	31.9
East North Central	18,106,043,295	15,806,625,291	2,299,418,004	87.3	12.7
West North Central	5,357,886,862	3,792,716,555	1,565,170,307	70.8	29.2
South Atlantic	9,458,694,089	3,647,325,421	5,811,368,668	38.6	61.4
East South Central	2,993,770,460	576,627,981	2,417,142,479	19.3	80.7
West South Central	4,308,490,556	4,122,845,324	185,645,232	95.7	4.3
Mountain	2,346,832,279	570,070,687	1,776,761,592	24.3	75.7
Pacific	11,414,720,430	1,227,170,179	10,187,550,251	10.8	89.2
NEW ENGLAND:					
Maine	762,111,856	27,322,607	734,789,249	3.6	96.4
New Hampshire	680,606,529	42,663,957	637,942,572	6.3	93.7
Vermont and Rhode Island [1]	811,459,260	246,288,701	565,170,559	30.4	69.6
Massachusetts	2,158,485,603	1,531,276,337	627,209,266	70.9	29.1
Connecticut	917,570,593	638,997,157	278,573,436	69.6	30.4
MIDDLE ATLANTIC:					
New York	10,976,563,667	5,698,053,810	5,278,509,857	51.9	48.1
New Jersey	2,990,678,924	2,969,624,473	21,054,451	99.3	0.7
Pennsylvania	6,373,552,248	5,192,408,422	1,181,143,826	81.5	18.5
EAST NORTH CENTRAL:					
Ohio	4,868,953,749	4,841,575,564	27,378,185	99.4	0.6
Indiana	2,422,939,907	2,297,028,287	125,911,620	94.8	5.2
Illinois	5,446,742,903	5,214,845,543	231,897,360	95.7	4.3
Michigan	3,532,622,960	2,418,135,519	1,114,487,441	68.5	31.5
Wisconsin	1,834,783,776	1,035,040,378	799,743,398	56.4	43.6
WEST NORTH CENTRAL:					
Minnesota	995,182,260	583,286,544	411,895,716	58.6	41.4
Iowa	1,483,096,406	710,728,152	772,368,254	47.9	52.1
Missouri	1,214,488,146	920,769,731	293,718,415	75.8	24.2
North Dakota	140,315,552	140,315,552	----------	100.0	--------
South Dakota	87,402,102	75,491,988	11,910,114	86.4	13.6
Nebraska	561,795,147	512,009,371	49,785,776	91.1	8.9
Kansas	875,607,249	850,115,217	25,492,032	97.1	2.9
SOUTH ATLANTIC:					
Delaware, District of Columbia, and Maryland [1]	2,231,616,742	943,708,290	1,287,908,452	42.3	57.7
Virginia	962,317,683	626,096,871	336,220,812	65.1	34.9
West Virginia	1,442,442,782	1,295,904,778	146,538,004	89.8	10.2
North Carolina	1,651,234,533	95,204,570	1,556,029,963	5.8	94.2
South Carolina	1,294,883,416	40,684,455	1,254,198,961	3.1	96.9
Georgia	1,269,290,375	80,899,165	1,188,391,210	6.4	93.6
Florida	606,908,558	564,827,292	42,081,266	93.1	6.9
EAST SOUTH CENTRAL:					
Kentucky	681,946,841	289,892,486	392,054,355	42.5	57.5
Tennessee	1,050,404,625	210,765,836	839,638,789	20.1	79.9
Alabama	1,209,646,423	24,197,088	1,185,449,335	2.0	98.0
Mississippi	51,772,571	51,772,571	----------	100.0	--------
WEST SOUTH CENTRAL:					
Arkansas	155,019,698	50,789,107	104,230,591	32.8	67.2
Louisiana	1,171,951,428	1,171,951,428	----------	100.0	--------
Oklahoma	725,488,247	722,706,430	2,781,817	99.6	0.4
Texas	2,256,031,183	2,177,398,359	78,632,824	96.5	3.5
MOUNTAIN:					
Montana	635,520,305	17,846,190	617,674,115	2.8	97.2
Idaho	473,289,670	281,482	473,008,188	0.1	99.9
Wyoming	74,596,866	71,513,246	3,083,620	95.9	4.1
Colorado	437,329,881	257,058,295	180,271,586	58.8	41.2
Arizona and New Mexico [1]	412,616,126	205,717,633	206,898,493	49.9	50.1
Utah	275,845,913	10,196,242	265,649,671	3.7	96.3
Nevada	37,633,518	7,457,599	30,175,919	19.8	80.2
PACIFIC:					
Washington	2,544,766,928	114,244,465	2,430,522,463	4.5	95.5
Oregon	968,614,120	88,301,731	880,312,389	9.1	90.9
California	7,901,339,382	1,024,623,983	6,876,715,399	13.0	87.0

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 29.—SUMMARY, ALL ESTABLISHMENTS AND HYDROELECTRIC ESTABLISHMENTS, 1932

ITEM	All establishments [1]	All establishments reporting water power	Establishments reporting 50 percent or more current generated by water power	Establishments reporting water power of 1,000 horsepower or more	Establishments reporting water power only
Number of establishments	3,429	585	485	290	292
Percent of all establishments	100.0	17.1	14.1	8.6	8.5
Prime movers:					
Number	11,185	5,999	4,004	5,015	1,096
Percent of all establishments	100.0	53.6	35.8	44.8	9.8
Horsepower	47,966,962	27,853,529	18,632,100	25,964,040	4,054,131
Percent of all establishments	100.0	58.1	38.8	54.1	8.5
Steam turbines:					
Number	2,822	1,117	435	943	
Percent of all establishments	100.0	39.6	15.4	33.4	
Horsepower	32,904,158	13,899,876	5,543,163	12,198,514	
Percent of all establishments	100.0	42.2	16.8	37.1	
Steam engines:					
Number	1,299	419	166	333	
Percent of all establishments	100.0	32.3	12.8	25.6	
Horsepower	649,476	221,448	71,979	174,032	
Percent of all establishments	100.0	34.1	11.1	26.8	
Internal-combustion engines:					
Number	3,298	697	266	439	
Percent of all establishments	100.0	21.1	8.1	13.3	
Horsepower	881,301	200,178	63,556	138,659	
Percent of all establishments	100.0	22.7	7.2	15.7	
Hydroturbines:					
Number	3,766	3,766	3,137	3,300	1,096
Percent of all establishments	100.0	100.0	83.3	87.6	29.1
Horsepower	13,532,027	13,532,027	12,953,402	13,452,835	4,054,131
Percent of all establishments	100.0	100.0	95.7	99.4	30.0
Generators:					
Number	11,111	5,944	4,005	4,971	1,086
Percent of all establishments	100.0	53.5	36.0	44.7	9.8
Kilowatt capacity	34,622,554	20,089,378	13,304,668	18,714,440	2,784,140
Percent of all establishments	100.0	58.0	38.4	54.1	8.0
Current generated, kilowatt-hours	79,657,466,651	48,158,498,598	33,951,578,571	45,082,166,400	9,584,848,013
Percent of all establishments	100.0	60.5	42.6	56.6	12.0
Total sales:[2]					
Number of customers	23,861,642	11,484,443	6,131,727	10,138,983	856,595
Percent of all establishments	100.0	48.1	25.7	42.5	3.6
Kilowatt-hours sold	88,265,073,126	52,125,746,148	34,366,504,236	48,047,571,468	8,195,919,986
Percent of all establishments	100.0	59.1	38.9	54.4	9.3
Total revenue	$1,975,303,955	$1,006,473,909	$564,123,712	$898,959,144	$87,063,814
Percent of all establishments	100.0	51.0	28.6	45.5	4.4

[1] Includes establishments which purchased all current distributed.
[2] Includes figures relating to "Sales for resale" (see table 44, footnote 1).

CHAPTER IV.—COMMERCIAL AND MUNICIPAL ESTABLISHMENTS

This chapter presents separate data for commercial and municipal establishments for the major items of the schedule, insofar as it is possible to do so without disclosing the operations of individual establishments. Establishments classified as "commercial" are operated by corporations, firms, and individuals; establishments classified as "municipal" are operated by municipalities. As a rule, municipal establishments operate in comparatively small communities, serving a limited number of customers; on the other hand, commercial establishments are generally much larger, serving a greater territory, in many cases operating in several States by means of transmission systems. In comparing data for commercial and municipal establishments, the reader must bear in mind that these two types operate on a different basis. Due consideration must be given to size of operation, source and cost of energy, local operating conditions, types of service, type of equipment, and other factors before valid conclusions can be drawn in regard to rates and service.

In the compilation of this chapter, it was decided to omit comment on the various items of the tables in order to present more tabular statements.

Tables 30 to 35 give data for either number of establishments, prime movers, generator equipment, or fuel consumed. Tables 36 to 39 show generated output. Tables 44 and 47 cover total sales, combining sales to ultimate consumers and sales for resale. Tables 40 to 42, and 45 present disposal of energy to ultimate consumers—number of customers, current sold, and revenue from electric service, with average kilowatt-hours per customer, revenue per customer, or revenue per kilowatt-hour. Table 43 shows salaried employees and wages earners. Tables 50 and 51 give condensed balance sheet for commercial and municipal establishments, respectively. Tables 48 and 49 give consolidated income, operating revenue, and expense statement for commercial and municipal establishments, respectively.

TABLE 30.—NUMBER OF ESTABLISHMENTS AND HORSEPOWER OF PRIME MOVERS, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1902 TO 1932

CENSUS YEAR	NUMBER OF ESTABLISHMENTS			HORSEPOWER OF PRIME MOVERS		
	Total	Commercial	Municipal	Total	Commercial	Municipal
1932	3,429	1,627	1,802	47,966,962	45,191,313	2,775,649
1927	4,335	2,137	2,198	35,710,128	33,661,406	2,048,722
1922	6,355	3,774	2,581	19,850,860	18,570,732	1,280,128
1917	6,542	4,224	2,318	12,936,755	12,077,657	859,098
1912	5,221	3,659	1,562	7,530,044	6,970,716	559,328
1907	4,714	3,462	1,252	4,098,188	3,776,837	321,351
1902	3,620	2,805	815	1,845,048	1,685,020	160,028

TABLE 31.—NUMBER OF ESTABLISHMENTS, GENERATING AND DISTRIBUTING ONLY, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	Total	GENERATING ENERGY			DISTRIBUTING ONLY		
		Total	Commercial	Municipal	Total	Commercial	Municipal
UNITED STATES	3,429	1,788	923	865	1,641	704	937
GEOGRAPHIC DIVISIONS:							
New England	304	137	108	29	167	116	51
Middle Atlantic	265	119	76	43	146	84	62
East North Central	705	328	152	176	377	169	208
West North Central	929	484	160	324	445	101	344
South Atlantic	381	173	103	70	208	72	136
East South Central	137	88	41	47	49	29	20
West South Central	237	179	70	109	58	23	35
Mountain	303	194	142	52	109	60	49
Pacific	168	86	71	15	82	50	32
NEW ENGLAND:							
Maine	55	28	22	6	27	25	2
New Hampshire	36	18	15	3	18	15	3
Vermont and Rhode Island [1]	69	31	23	8	38	29	9
Massachusetts	113	42	33	9	71	37	34
Connecticut	31	18	15	3	13	10	3
MIDDLE ATLANTIC:							
New York	122	53	35	18	69	34	35
New Jersey	25	13	8	5	12	5	7
Pennsylvania	118	53	33	20	65	45	20
EAST NORTH CENTRAL:							
Ohio	191	69	22	47	122	57	65
Indiana	134	51	19	32	83	33	50
Illinois	101	60	24	36	41	23	18
Michigan	102	74	37	37	28	14	14
Wisconsin	177	74	50	24	103	42	61
WEST NORTH CENTRAL:							
Minnesota	158	67	23	44	91	15	76
Iowa	176	83	25	58	93	28	65
Missouri	104	74	33	41	30	18	12
North Dakota	35	28	13	15	7	4	3
South Dakota	71	48	19	29	23	10	13
Nebraska	201	101	28	73	100	7	93
Kansas	184	83	19	64	101	19	82
SOUTH ATLANTIC:							
Delaware, District of Columbia, and Maryland [1]	39	20	11	9	19	12	7
Virginia	47	29	21	8	18	11	7
West Virginia	41	15	14	1	26	23	3
North Carolina	103	38	22	16	65	15	50
South Carolina	43	16	14	2	27	7	20
Georgia	67	23	12	11	44	3	41
Florida	41	32	9	23	9	1	8
EAST SOUTH CENTRAL:							
Kentucky	28	20	15	5	8	4	4
Tennessee	46	28	14	14	18	15	3
Alabama	30	10	7	3	20	9	11
Mississippi	33	30	5	25	3	1	2
WEST SOUTH CENTRAL:							
Arkansas	34	27	14	13	7	7	--------
Louisiana	47	39	16	23	8	3	5
Oklahoma	92	53	14	39	39	9	30
Texas	64	60	26	34	4	4	--------
MOUNTAIN:							
Montana	27	21	17	4	6	6	--------
Idaho	48	21	17	4	27	15	12
Wyoming	44	29	26	3	15	6	9
Colorado	61	43	23	20	18	10	8
Arizona and New Mexico [1]	60	46	43	3	14	12	2
Utah	45	26	9	17	19	4	15
Nevada	18	8	7	1	10	7	3
PACIFIC:							
Washington	69	29	25	4	40	29	11
Oregon	36	27	20	7	9	5	4
California	63	30	26	4	33	16	17

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 32.—NUMBER OF ESTABLISHMENTS REPORTING GENERATING EQUIPMENT, AND HORSEPOWER OF PRIME MOVERS, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	NUMBER OF ESTABLISHMENTS REPORTING GENERATING EQUIPMENT			HORSEPOWER OF PRIME MOVERS		
	Total	Commercial	Municipal	Total	Commercial	Municipal
UNITED STATES	1,867	966	901	47,966,962	45,191,313	2,775,649
GEOGRAPHIC DIVISIONS:						
New England	144	113	31	3,643,604	3,562,782	80,822
Middle Atlantic	130	84	46	11,310,305	11,180,530	129,775
East North Central	346	158	188	11,365,729	10,566,082	799,647
West North Central	491	163	328	3,655,066	3,194,052	461,014
South Atlantic	193	112	81	6,129,902	5,887,160	242,742
East South Central	91	43	48	2,051,117	1,981,180	69,937
West South Central	187	76	111	2,471,670	2,303,605	168,065
Mountain	198	145	53	1,674,732	1,610,561	64,171
Pacific	87	72	15	5,664,837	4,905,361	759,476
NEW ENGLAND:						
Maine	30	24	6	352,999	351,113	1,886
New Hampshire	18	15	3	420,911	418,941	1,970
Vermont and Rhode Island [1]	33	24	9	599,232	586,167	13,065
Massachusetts	45	35	10	1,590,644	1,537,718	52,926
Connecticut	18	15	3	679,818	668,843	10,975
MIDDLE ATLANTIC:						
New York	62	41	21	6,276,029	6,196,517	79,512
New Jersey	13	8	5	1,426,145	1,414,469	11,676
Pennsylvania	55	35	20	3,608,131	3,569,544	38,587
EAST NORTH CENTRAL:						
Ohio	72	23	49	2,916,741	2,726,981	189,760
Indiana	53	20	33	1,331,301	1,152,219	179,082
Illinois	63	27	36	3,698,320	3,587,405	110,915
Michigan	74	37	37	2,234,955	1,963,178	271,777
Wisconsin	84	51	33	1,184,412	1,136,299	48,113
WEST NORTH CENTRAL:						
Minnesota	68	23	45	658,845	593,301	65,544
Iowa	84	26	58	843,009	769,563	73,446
Missouri	74	33	41	1,021,731	948,837	72,894
North Dakota	28	13	15	104,455	96,620	7,835
South Dakota	49	20	29	99,259	81,509	17,750
Nebraska	103	28	75	349,038	271,192	77,846
Kansas	85	20	65	578,729	433,030	145,699
SOUTH ATLANTIC:						
Delaware, District of Columbia and Maryland [1]	22	12	10	1,226,753	1,207,236	19,517
Virginia	30	21	9	568,468	542,587	25,881
West Virginia	19	18	1	731,400	731,175	225
North Carolina	39	23	16	1,380,658	1,325,894	54,764
South Carolina	18	15	3	939,956	937,639	2,317
Georgia	31	14	17	748,092	725,297	22,795
Florida	34	9	25	534,575	417,332	117,243
EAST SOUTH CENTRAL:						
Kentucky	20	15	5	455,367	443,180	12,187
Tennessee	29	15	14	578,618	551,765	26,853
Alabama	11	8	3	925,878	921,528	4,350
Mississippi	31	5	26	91,254	64,707	26,547
WEST SOUTH CENTRAL:						
Arkansas	27	14	13	207,035	188,376	18,659
Louisiana	43	18	25	467,084	431,217	35,867
Oklahoma	53	14	39	470,578	425,766	44,812
Texas	64	30	34	1,326,973	1,258,246	68,727
MOUNTAIN:						
Montana	22	18	4	451,820	451,459	361
Idaho	22	18	4	307,745	299,387	8,358
Wyoming	30	26	4	50,364	49,144	1,220
Colorado	43	23	20	310,645	271,340	39,305
Arizona and New Mexico [1]	47	44	3	333,308	332,338	970
Utah	26	9	17	201,115	187,398	13,717
Nevada	8	7	1	19,735	19,495	240
PACIFIC:						
Washington	30	26	4	1,230,158	839,442	390,716
Oregon	27	20	7	537,165	509,005	28,160
California	30	26	4	3,897,514	3,556,914	340,600

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 33.—GENERATORS—NUMBER AND KILOWATT CAPACITY BY TYPE OF PRIME MOVER, COMMERCIAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	TOTAL		STEAM						INTERNAL-COMBUSTION ENGINES		HYDROTURBINES	
			Total		Turbines		Engines					
	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts
UNITED STATES	8,561	32,647,578	3,183	23,311,825	2,305	22,955,221	878	356,604	1,952	342,785	3,426	8,992,968
GEOGRAPHIC DIVISIONS:												
New England	813	2,579,386	251	1,734,987	201	1,705,690	50	29,297	39	3,913	523	840,486
Middle Atlantic	1,126	8,185,083	494	6,714,105	403	6,657,193	91	56,912	68	8,587	564	1,462,391
East North Central	1,476	7,686,004	697	7,028,741	524	6,936,357	173	92,384	79	12,924	700	644,339
West North Central	1,334	2,290,962	521	1,734,039	320	1,678,201	201	55,838	523	104,208	290	452,715
South Atlantic	974	4,111,112	333	2,167,129	257	2,154,120	76	13,009	189	36,428	452	1,907,555
East South Central	485	1,430,918	200	690,597	133	663,681	67	26,916	190	20,403	95	719,918
West South Central	944	1,680,868	345	1,492,630	242	1,461,821	103	30,809	556	98,967	43	89,271
Mountain	790	1,114,756	207	335,100	112	306,958	95	28,142	247	48,744	336	730,912
Pacific	619	3,568,489	135	1,414,497	113	1,391,200	22	23,297	61	8,611	423	2,145,381
NEW ENGLAND:												
Maine	204	263,960	17	54,165	14	53,200	3	965	15	1,306	172	208,489
New Hampshire	125	281,931	21	62,357	13	60,000	8	2,357	9	748	95	218,826
Vermont and Rhode Isalnd [1]	158	423,107	35	252,990	26	251,200	9	1,790	9	304	114	169,813
Massachusetts	224	1,116,682	129	953,265	100	929,200	29	24,065	6	1,555	89	161,862
Connecticut	102	493,706	49	412,210	48	412,090	1	120	----------	----------	53	81,496
MIDDLE ATLANTIC:												
New York	660	4,525,358	199	3,396,722	151	3,364,000	48	32,722	13	1,394	448	1,127,242
New Jersey	77	1,054,885	68	1,049,400	64	1,048,400	4	1,000	1	115	8	5,370
Pennsylvania	389	2,604,840	227	2,267,983	188	2,244,793	39	23,190	54	7,078	108	329,779
EAST NORTH CENTRAL:												
Ohio	202	2,010,242	173	1,994,297	138	1,978,617	35	15,680	4	360	25	15,585
Indiana	166	859,508	111	823,249	96	817,805	15	5,444	16	3,330	39	32,929
Illinois	308	2,536,904	233	2,511,384	161	2,465,125	72	46,259	13	3,230	62	22,290
Michigan	426	1,463,222	70	1,122,325	62	1,119,650	8	2,675	26	3,871	330	337,026
Wisconsin	374	816,128	110	577,486	67	555,160	43	22,326	20	2,133	244	236,509
WEST NORTH CENTRAL:												
Minnesota	193	431,515	59	303,074	44	299,350	15	3,724	41	6,422	93	122,019
Iowa	276	548,404	145	377,019	74	355,517	71	21,502	62	20,018	69	151,367
Missouri	216	667,394	93	497,479	71	490,034	22	7,445	102	17,720	21	152,195
North Dakota	79	65,127	49	60,403	24	54,000	25	6,403	30	4,724	----------	----------
South Dakota	112	55,286	22	38,510	14	36,850	8	1,660	79	12,796	11	3,980
Nebraska	233	195,623	73	162,599	38	157,000	35	5,599	105	19,447	55	13,577
Kansas	225	327,613	80	294,955	55	285,450	25	9,505	104	23,081	41	9,577

SOUTH ATLANTIC:												
Delaware, District of Columbia, and Maryland [1]	75	843,095	44	567,320	44	567,320	----------	----------	21	4,475	10	271,300
Virginia	174	390,813	50	297,155	42	296,100	8	1,055	29	4,856	95	88,802
West Virginia	101	538,675	59	477,280	49	475,710	10	1,570	24	4,968	18	56,427
North Carolina	169	965,177	31	311,550	26	309,750	5	1,800	17	3,128	121	650,499
South Carolina	140	641,216	35	145,846	20	143,550	15	2,296	7	595	98	494,775
Georgia	159	458,992	49	126,716	30	124,020	19	2,696	11	974	99	331,302
Florida	156	273,144	65	241,262	46	237,670	19	3,592	80	17,432	11	14,450
EAST SOUTH CENTRAL:												
Kentucky	131	330,882	72	222,935	52	218,630	20	4,305	41	2,622	18	105,325
Tennessee	129	406,906	60	196,705	37	183,975	23	12,730	20	1,478	49	208,723
Alabama	79	646,154	23	235,300	16	228,500	7	6,800	28	4,984	28	405,870
Mississippi	146	46,976	45	35,657	28	32,576	17	3,081	101	11,319	----------	----------
WEST SOUTH CENTRAL:												
Arkansas	127	139,810	60	65,165	35	57,530	25	7,635	57	7,939	10	66,706
Louisiana	144	304,423	40	200,551	34	288,550	6	2,001	104	13,872	----------	----------
Oklahoma	183	312,683	81	296,046	54	284,996	27	11,050	97	15,137	5	1,500
Texas	490	923,952	164	840,868	119	830,745	45	10,123	298	62,019	28	21,065
MOUNTAIN:												
Montana	124	318,092	26	16,452	9	7,450	17	9,002	27	2,680	71	298,960
Idaho	87	202,556	3	700	----------	----------	3	700	5	657	79	201,199
Wyoming	89	35,386	42	30,907	24	27,620	18	3,287	33	2,559	14	1,920
Colorado	166	195,740	70	134,096	42	126,788	28	7,308	44	5,538	52	56,106
Arizona and New Mexico [1]	220	222,421	61	109,945	32	102,100	29	7,845	121	34,240	38	78,236
Utah	78	127,625	3	41,000	3	41,000	----------	----------	5	1,421	70	85,204
Nevada	26	12,936	2	2,000	2	2,000	----------	----------	12	1,649	12	9,287
PACIFIC:												
Washington	141	592,908	31	160,323	21	155,900	10	4,423	16	1,539	94	431,046
Oregon	131	362,077	31	178,800	26	175,500	5	3,300	17	1,946	83	181,331
California	347	2,613,504	73	1,075,374	66	1,059,800	7	15,574	28	5,126	246	1,533,004

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 34.—GENERATORS—NUMBER AND KILOWATT CAPACITY BY TYPE OF PRIME MOVER, MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	TOTAL		STEAM						INTERNAL-COMBUSTION ENGINES		HYDROTURBINES	
			Total		Turbines		Engines					
	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts	Number	Kilowatts
UNITED STATES	2,550	1,974,976	937	1,173,599	524	1,077,621	418	95,978	1,322	254,843	291	546,534
GEOGRAPHIC DIVISIONS:												
New England	83	60,001	24	37,899	19	36,399	5	1,500	13	5,388	46	16,714
Middle Atlantic	136	86,245	68	58,666	46	54,859	22	3,807	53	20,504	15	7,075
East North Central	540	560,754	323	480,408	185	447,947	138	32,461	136	28,837	81	51,509
West North Central	893	324,133	267	220,063	122	181,990	145	38,073	600	96,028	26	8,042
South Atlantic	218	179,805	98	143,124	63	136,667	35	6,457	98	23,264	22	13,417
East South Central	128	49,336	55	37,935	33	33,384	22	4,551	69	9,341	4	2,060
West South Central	351	111,418	63	52,874	33	47,065	30	5,809	284	57,970	4	574
Mountain	122	42,444	21	15,760	10	14,060	11	1,700	59	9,779	42	16,905
Pacific	79	560,840	18	126,870	13	125,250	5	1,620	10	3,732	51	430,238
NEW ENGLAND:												
Maine	8	1,193							1	48	7	1,145
New Hampshire	7	1,390							4	790	3	600
Vermont and Rhode Island [1]	22	8,986	2	1,800	2	1,800					20	7,186
Massachusetts	39	39,452	19	29,349	14	27,849	5	1,500	7	3,440	13	6,663
Connecticut	7	8,980	3	6,750	3	6,750			1	1,110	3	1,120
MIDDLE ATLANTIC:												
New York	58	52,273	24	32,071	12	30,000	12	2,071	19	13,127	15	7,075
New Jersey	15	7,560	3	4,750	3	4,750			12	2,810		
Pennsylvania	63	26,412	41	21,845	31	20,109	10	1,736	22	4,567		
EAST NORTH CENTRAL:												
Ohio	142	135,372	115	130,577	61	116,383	54	14,194	27	4,795		
Indiana	99	128,374	76	116,669	55	111,341	21	5,328	22	5,505	1	6,200
Illinois	97	68,922	58	41,145	22	33,249	36	7,896	32	5,377	7	22,400
Michigan	114	194,214	46	175,743	37	174,149	9	1,594	25	5,820	43	12,651
Wisconsin	88	33,872	28	16,274	10	12,825	18	3,449	30	7,340	30	10,258
WEST NORTH CENTRAL:												
Minnesota	120	45,705	74	38,417	23	24,170	51	14,247	35	4,511	11	2,777
Iowa	158	51,965	51	29,536	21	22,300	30	7,236	94	17,334	13	5,095
Missouri	119	49,108	39	33,292	19	28,300	20	4,992	79	15,773	1	43
North Dakota	36	5,273	3	3,000	2	2,500	1	500	33	2,273		
South Dakota	65	11,643	11	5,220	1	1,000	10	4,220	54	6,423		
Nebraska	208	56,563	46	36,773	21	32,237	25	4,536	161	19,663	1	127
Kansas	187	103,876	43	73,825	35	71,483	8	2,342	144	30,051		

SOUTH ATLANTIC:												
Delaware, District of Columbia, and Maryland [1]	23	13,972	10	11,340	9	11,100	1	240	13	2,632		
Virginia	33	18,655	10	10,850	10	10,850			7	1,505	16	6,300
West Virginia	1	150	1	150			1	150				
North Carolina	45	39,510	27	36,355	19	34,867	8	1,488	15	2,630	3	525
South Carolina	6	1,640	2	800	1	600	1	200	4	840		
Georgia	34	15,970	22	8,262	4	5,250	18	3,012	9	1,116	3	6,592
Florida	76	89,908	26	75,367	20	74,000	6	1,367	50	14,541		
EAST SOUTH CENTRAL:												
Kentucky	14	8,889	14	8,889	7	7,300	7	1,589				
Tennessee	39	18,635	18	14,618	12	13,576	6	1,042	17	1,957	4	2,060
Alabama	8	3,119	6	2,927	2	1,775	4	1,152	2	192		
Mississippi	67	18,693	17	11,501	12	10,733	5	768	50	7,192		
WEST SOUTH CENTRAL:												
Arkansas	37	12,998	14	8,636	7	7,800	7	836	23	4,362		
Louisiana	76	24,201	8	11,413	8	11,413			68	12,788		
Oklahoma	117	30,527	22	8,989	8	6,602	14	2,387	93	21,114	2	424
Texas	121	43,692	19	23,836	10	21,250	9	2,586	100	19,706	2	150
MOUNTAIN:												
Montana	6	221							6	221		
Idaho	13	5,451							4	1,565	9	3,886
Wyoming	8	886							8	886		
Colorado	53	25,506	21	15,760	10	14,060	11	1,700	21	3,379	11	6,367
Arizona and New Mexico [1]	8	664							8	664		
Utah	31	9,574							9	2,922	22	6,652
Nevada	3	142							3	142		
PACIFIC:												
Washington	32	289,633	7	65,000	7	65,000					25	224,633
Oregon	17	20,352	3	6,200	1	6,000	2	200	7	2,452	7	11,700
California	30	250,855	8	55,670	5	54,250	3	1,420	3	1,280	19	193,905

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 35.—CONSUMPTION OF FUEL, BY KIND, WITH COAL EQUIVALENT, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1932

KIND	Unit of measure	QUANTITY		
		Total	Commercial	Municipal
Anthracite	Ton (2,240 lbs.)	1,392,040	1,369,136	22,904
Bituminous coal	Ton (2,000 lbs.)	25,998,430	24,093,551	1,904,879
Coke	Ton (2,000 lbs.)	152,841	152,841	----------
Fuel oil or gasoline	Barrel (42 gals.)	7,867,985	5,904,706	1,963,279
Gas, manufactured	1,000 cu. ft	1,936,336	1,933,364	2,972
Gas, natural	1,000 cu. ft	96,365,126	91,049,719	5,315,407
Total equivalent fuel	Ton (2,000 lbs.)	----------	----------	----------
Kilowatt-hours generated by fuel-burning generating stations.	Kilowatt-hours	46,090,016,902	43,933,807,425	2,156,209,477
Pounds of coal equivalent per kilowatt-hour of output.	----------	----------	----------	----------

KIND	Unit of measure	EQUIVALENT TONS OF BITUMINOUS COAL [1]		
		Total	Commercial	Municipal
Anthracite	Ton (2,240 lbs.)	1,559,085	1,533,432	25,653
Bituminous coal	Ton (2,000 lbs.)	25,998,430	24,093,551	1,904,879
Coke	Ton (2,000 lbs.)	132,905	132,905	----------
Fuel oil or gasoline	Barrel (42 gals.)	1,966,996	1,476,176	490,820
Gas, manufactured	1,000 cu. ft	43,030	42,964	66
Gas, natural	1,000 cu. ft	4,189,788	3,958,683	231,105
Total equivalent fuel	Ton (2,000 lbs.)	33,890,234	31,237,711	2,652,523
Kilowatt-hours generated by fuel-burning generating stations.	Kilowatt-hours	----------	----------	----------
Pounds of coal equivalent per kilowatt-hour of output.	----------	1.47	1.42	2.46

[1] For conversion, coal equivalent, see footnote, table 8.

TABLE 36.—CURRENT GENERATED, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, 1902 TO 1932; WITH TYPE OF PRIME MOVER: 1932 AND 1927

ITEM	GENERATED OUTPUT (KILOWATT-HOURS)			PERCENT OF TOTAL	
	Total	Commercial	Municipal	Commercial	Municipal
1932, total	79,657,466,651	75,692,668,065	3,964,798,586	95.0	5.0
Steam	45,374,873,980	43,614,446,285	1,760,427,695	96.1	3.9
Water	33,567,449,749	31,758,860,640	1,808,589,109	94.6	5.4
Internal-combustion	715,142,922	319,361,140	395,781,782	44.7	55.3
1927, total	74,686,378,010	71,306,839,538	3,379,538,472	95.5	4.5
Steam	45,391,190,914	43,886,864,568	1,504,326,346	96.7	3.3
Water	28,718,138,409	27,103,845,611	1,614,292,798	94.4	5.6
Internal-combustion	577,048,687	316,129,359	260,919,328	54.8	45.2
1922	40,291,536,435	38,413,240,163	1,878,296,272	95.3	4.7
1917	25,438,303,272	24,398,983,183	1,039,320,089	95.9	4.1
1912	11,569,109,885	11,031,583,155	537,526,730	95.4	4.6
1907	5,862,276,737	5,572,813,949	289,462,788	95.1	4.9
1902	2,507,051,115	2,311,146,676	195,904,439	92.2	7.8

TABLE 37.—CURRENT GENERATED, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	GENERATED OUTPUT (KILOWATT-HOURS)			PERCENT OF TOTAL	
	Total	Commercial	Municipal	Commercial	Municipal
UNITED STATES	79,657,466,651	75,692,668,065	3,964,798,586	95.0	5.0
GEOGRAPHIC DIVISIONS:					
New England	5,330,233,841	5,224,337,221	105,896,620	98.0	2.0
Middle Atlantic	20,340,794,839	20,177,113,635	163,681,204	99.2	.8
East North Central	18,106,043,295	17,031,475,387	1,074,567,908	94.1	5.9
West North Central	5,357,886,862	4,825,708,190	532,178,672	90.1	9.9
South Atlantic	9,458,694,089	9,191,865,517	266,828,572	97.2	2.8
East South Central	2,993,770,460	2,914,604,332	79,166,128	97.4	2.6
West South Central	4,308,490,556	4,111,942,526	196,548,030	95.4	4.6
Mountain	2,346,832,279	2,266,345,200	80,487,079	96.6	3.4
Pacific	11,414,720,430	9,949,276,057	1,465,444,373	87.2	12.8
NEW ENGLAND:					
Maine	762,111,856	758,342,541	3,769,315	99.5	.5
New Hampshire	680,606,529	678,643,419	1,963,110	99.7	.3
Vermont and Rhode Island [1]	811,459,260	795,901,699	15,557,561	98.1	1.9
Massachusetts	2,158,485,603	2,085,461,082	73,024,521	96.6	3.4
Connecticut	917,570,593	905,988,480	11,582,113	98.7	1.3
MIDDLE ATLANTIC:					
New York	10,976,563,667	10,874,359,241	102,204,426	99.1	.9
New Jersey	2,990,678,924	2,978,792,874	11,886,050	99.6	.4
Pennsylvania	6,373,552,248	6,323,961,520	49,590,728	99.2	.8
EAST NORTH CENTRAL:					
Ohio	4,868,953,749	4,569,663,357	299,290,392	93.9	6.1
Indiana	2,422,939,907	2,247,557,086	175,382,821	92.8	7.2
Illinois	5,446,742,903	5,240,302,354	206,440,549	96.2	3.8
Michigan	3,532,622,960	3,203,683,801	328,939,159	90.7	9.3
Wisconsin	1,834,783,776	1,770,268,789	64,514,987	96.5	3.5
WEST NORTH CENTRAL:					
Minnesota	995,182,260	915,138,667	80,043,593	92.0	8.0
Iowa	1,483,096,406	1,402,843,118	80,253,288	94.6	5.4
Missouri	1,214,488,146	1,132,543,518	81,944,628	93.3	6.7
North Dakota	140,315,552	133,402,669	6,912,883	95.1	4.9
South Dakota	87,402,102	67,072,401	20,329,701	76.7	23.3
Nebraska	561,795,147	489,125,883	72,669,264	87.1	12.9
Kansas	875,607,249	685,581,934	190,025,315	78.3	21.7
SOUTH ATLANTIC:					
Delaware, District of Columbia, and Maryland [1]	2,231,616,742	2,211,777,825	19,838,917	99.1	.9
Virginia	962,317,683	912,084,183	50,233,500	94.8	5.2
West Virginia	1,442,442,782	1,442,304,782	138,000	100.0	(2)
North Carolina	1,651,234,533	1,609,387,148	41,847,385	97.5	2.5
South Carolina	1,294,883,416	1,293,919,916	963,500	99.9	.1
Georgia	1,269,290,375	1,257,166,305	12,124,070	99.0	1.0
Florida	606,908,558	465,225,358	141,683,200	76.7	23.3
EAST SOUTH CENTRAL:					
Kentucky	681,946,841	660,942,221	21,004,620	96.9	3.1
Tennessee	1,050,404,625	1,022,064,616	28,340,009	97.3	2.7
Alabama	1,209,646,423	1,207,681,419	1,965,004	99.8	.2
Mississippi	51,772,571	23,916,076	27,856,495	46.2	53.8
WEST SOUTH CENTRAL:					
Arkansas	155,019,698	137,265,632	17,754,066	88.5	11.5
Louisiana	1,171,951,428	1,125,864,457	46,086,971	96.1	3.9
Oklahoma	725,488,247	669,054,212	56,434,035	92.2	7.8
Texas	2,256,031,183	2,179,758,225	76,272,958	96.6	3.4
MOUNTAIN:					
Montana	635,520,305	635,165,784	354,521	99.9	.1
Idaho	473,289,670	458,051,874	15,237,796	96.8	3.2
Wyoming	74,596,866	73,580,620	1,016,246	98.6	1.4
Colorado	437,329,881	394,157,356	43,172,525	90.1	9.9
Arizona and New Mexico [1]	412,616,126	411,461,064	1,155,062	99.7	.3
Utah	275,845,913	256,495,478	19,350,435	93.0	7.0
Nevada	37,633,518	37,433,024	200,494	99.5	.5
PACIFIC:					
Washington	2,544,766,928	1,979,089,668	565,677,260	77.8	22.2
Oregon	968,614,120	929,935,347	38,678,773	96.0	4.0
California	7,901,339,382	7,040,251,042	861,088,340	89.1	10.9

[1] Combined to avoid disclosing the operations of individual establishments.
[2] Less than 1/10 of 1 percent.

TABLE 38.—CURRENT GENERATED, BY TYPE OF PRIME MOVER, COMMERCIAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	Total (kilowatt-hours)	KILOWATT-HOURS GENERATED BY—		
		Steam	Water	Internal-combustion
UNITED STATES	75,692,668,065	43,614,446,285	31,758,860,640	319,361,140
GEOGRAPHIC DIVISIONS:				
New England	5,224,337,221	2,420,576,809	2,799,462,034	4,298,378
Middle Atlantic	20,177,113,635	13,735,956,658	6,439,375,660	1,781,317
East North Central	17,031,475,387	14,922,412,598	2,100,182,332	8,880,457
West North Central	4,825,708,190	3,162,534,023	1,545,438,452	117,735,715
South Atlantic	9,191,865,517	3,384,109,706	5,774,515,079	33,240,732
East South Central	2,914,604,332	488,449,462	2,415,276,456	10,878,414
West South Central	4,111,942,526	3,872,485,108	183,854,726	55,602,692
Mountain	2,266,345,200	466,335,408	1,723,156,103	76,853,689
Pacific	9,949,276,057	1,161,586,513	8,777,599,798	10,089,746
NEW ENGLAND:				
Maine	758,342,541	26,103,075	731,161,471	1,077,995
New Hampshire	678,643,419	41,750,815	636,878,362	14,242
Vermont and Rhode Island [1]	795,901,699	246,133,741	549,612,998	154,960
Massachusetts	2,085,461,082	1,473,799,441	608,610,460	3,051,181
Connecticut	905,988,480	632,789,737	273,198,743	----------
MIDDLE ATLANTIC:				
New York	10,874,359,241	5,636,560,320	5,237,177,383	681,538
New Jersey	2,978,792,874	2,957,554,236	21,054,451	184,187
Pennsylvania	6,323,961,520	5,141,902,102	1,181,143,826	915,592
EAST NORTH CENTRAL:				
Ohio	4,569,663,357	4,542,205,392	27,378,185	79,780
Indiana	2,247,557,086	2,122,039,090	124,755,520	762,476
Illinois	5,240,302,354	5,128,632,578	106,262,656	5,407,120
Michigan	3,203,683,801	2,130,423,924	1,072,508,168	751,709
Wisconsin	1,770,268,789	999,111,614	769,277,803	1,879,372
WEST NORTH CENTRAL:				
Minnesota	915,138,667	499,322,461	406,793,416	9,022,790
Iowa	1,402,843,118	617,475,543	758,103,323	27,264,252
Missouri	1,132,543,518	820,869,938	293,653,791	18,019,789
North Dakota	133,402,669	130,961,813	----------	2,440,856
South Dakota	67,072,401	46,208,114	11,910,114	8,954,173
Nebraska	489,125,883	412,406,434	49,485,776	27,233,673
Kansas	685,581,934	635,289,720	25,492,032	24,800,182
SOUTH ATLANTIC:				
Delaware, District of Columbia, and Maryland [1]	2,211,777,825	916,544,545	1,287,908,452	7,324,828
Virginia	912,084,183	601,735,392	304,518,207	5,830,584
West Virginia	1,442,304,782	1,294,850,791	146,538,004	915,987
North Carolina	1,609,387,148	52,383,932	1,555,028,979	1,974,237
South Carolina	1,293,919,916	39,620,061	1,254,198,961	100,894
Georgia	1,257,166,305	72,377,790	1,184,241,210	547,305
Florida	465,225,358	406,597,195	42,081,266	16,546,897
EAST SOUTH CENTRAL:				
Kentucky	660,942,221	266,902,109	392,054,355	1,985,757
Tennessee	1,022,064,616	183,312,079	837,772,766	979,771
Alabama	1,207,681,419	20,405,970	1,185,449,335	1,826,114
Mississippi	23,916,076	17,829,304	----------	6,086,772
WEST SOUTH CENTRAL:				
Arkansas	137,265,632	27,690,240	104,230,591	5,344,801
Louisiana	1,125,864,457	1,119,554,304	----------	6,310,153
Oklahoma	669,054,212	652,690,128	2,116,643	14,247,441
Texas	2,179,758,225	2,072,550,436	77,507,492	29,760,297
MOUNTAIN:				
Montana	635,165,784	14,091,844	617,674,115	3,399,825
Idaho	458,051,874	76,190	457,829,508	146,176
Wyoming	73,580,620	69,198,405	3,083,620	1,298,595
Colorado	394,157,356	225,914,586	159,402,801	8,839,969
Arizona and New Mexico [1]	411,461,064	144,435,533	206,898,493	60,127,038
Utah	256,495,478	8,337,200	248,091,647	66,631
Nevada	37,433,024	4,281,650	30,175,919	2,975,455
PACIFIC:				
Washington	1,979,089,668	108,236,563	1,869,160,203	1,692,902
Oregon	929,935,347	83,582,964	845,419,836	932,547
California	7,040,251,042	969,766,986	6,063,019,759	7,464,297

[1] Combined to avoid disclosing the operations of individual establishments.

TABLE 39.—CURRENT GENERATED, BY TYPE OF PRIME MOVER, MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	Total (kilowatt-hours)	KILOWATT-HOURS GENERATED BY—		
		Steam	Water	Internal-combustion
UNITED STATES	3,964,798,586	1,760,427,695	1,808,589,109	395,781,782
GEOGRAPHIC DIVISIONS:				
New England	105,896,620	52,273,953	44,223,048	9,399,619
Middle Atlantic	163,681,204	88,444,093	41,332,474	33,904,637
East North Central	1,074,567,908	831,049,411	199,235,672	44,282,825
West North Central	532,178,672	370,927,746	19,731,855	141,519,071
South Atlantic	266,828,572	196,269,895	36,853,589	33,705,088
East South Central	79,166,128	59,407,254	1,866,023	17,892,851
West South Central	196,548,030	91,679,351	1,790,506	103,078,173
Mountain	80,487,079	18,849,892	53,605,489	8,031,698
Pacific	1,465,444,373	51,526,100	1,409,950,453	3,967,820
NEW ENGLAND:				
Maine	3,769,315		3,627,778	141,537
New Hampshire	1,963,110		1,064,210	898,900
Vermont and Rhode Island [1]	15,557,561		15,557,561	
Massachusetts	73,024,521	48,192,613	18,598,806	6,233,102
Connecticut	11,582,113	4,081,340	5,374,693	2,126,080
MIDDLE ATLANTIC:				
New York	102,204,426	39,273,952	41,332,474	21,598,000
New Jersey	11,886,050	6,926,980		4,959,070
Pennsylvania	49,590,728	42,243,161		7,347,567
EAST NORTH CENTRAL:				
Ohio	299,290,392	292,920,755		6,369,637
Indiana	175,382,821	166,243,296	1,156,100	7,983,425
Illinois	206,440,549	71,150,297	125,634,704	9,655,548
Michigan	328,939,159	277,882,094	41,979,273	9,077,792
Wisconsin	64,514,987	22,852,969	30,465,595	11,196,423
WEST NORTH CENTRAL:				
Minnesota	80,043,593	68,769,954	5,102,300	6,171,339
Iowa	80,253,288	41,673,597	14,264,931	24,314,760
Missouri	81,944,628	52,893,115	64,624	28,986,889
North Dakota	6,912,883	3,681,500		3,231,383
South Dakota	20,329,701	7,763,729		12,565,972
Nebraska	72,669,264	48,478,267	300,000	23,890,997
Kansas	190,025,315	147,667,584		42,357,731
SOUTH ATLANTIC:				
Delaware, District of Columbia, and Maryland [1]	19,838,917	15,248,189		4,590,728
Virginia	50,233,500	15,131,540	31,702,605	3,399,355
West Virginia	138,000	138,000		
North Carolina	41,847,385	35,823,619	1,000,984	5,022,782
South Carolina	963,500	19,500		944,000
Georgia	12,124,070	7,200,465	4,150,000	773,605
Florida	141,683,200	122,708,582		18,974,618
EAST SOUTH CENTRAL:				
Kentucky	21,004,620	21,004,620		
Tennessee	28,340,009	22,237,850	1,866,023	4,236,136
Alabama	1,965,004	1,609,204		355,800
Mississippi	27,856,495	14,555,580		13,300,915
WEST SOUTH CENTRAL:				
Arkansas	17,754,066	8,604,414		9,149,652
Louisiana	46,086,971	26,400,000		19,686,971
Oklahoma	56,434,035	16,329,440	665,174	39,439,421
Texas	76,272,958	40,345,497	1,125,332	34,802,129
MOUNTAIN:				
Montana	354,521			354,521
Idaho	15,237,796		15,178,680	59,116
Wyoming	1,016,246			1,016,246
Colorado	43,172,525	18,849,892	20,868,785	3,453,848
Arizona and New Mexico [1]	1,155,062			1,155,062
Utah	19,350,435		17,558,024	1,792,411
Nevada	200,494			200,494
PACIFIC:				
Washington	565,677,260	4,315,000	561,362,260	
Oregon	38,678,773	203,000	34,892,553	3,583,220
California	861,088,340	47,008,100	813,695,640	384,600

[1] Combined to avoid disclosing the operations of individual establishments

TABLE 40.—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, ULTIMATE CONSUMERS ONLY, BY CLASS OF SERVICE, COMMERCIAL ESTABLISHMENTS, BY GEOGRAPHIC DIVISIONS: 1932

DIVISION	Total [1]	Farm service (all uses)	Domestic service	COMMERCIAL SERVICE		Municipal street lighting
				Small light and power (retail)	Large light and power (wholesale)	
	NUMBER OF CUSTOMERS					
UNITED STATES	21,630,662	592,692	17,337,876	3,284,326	365,038	28,997
GEOGRAPHIC DIVISIONS						
New England	2,064,478	38,219	1,702,520	279,766	41,002	1,399
Middle Atlantic	6,534,383	104,965	5,298,865	991,952	125,702	6,781
East North Central	5,143,617	181,282	4,161,222	735,705	51,684	5,996
West North Central	1,921,587	50,090	1,510,757	316,822	39,030	3,432
South Atlantic	1,544,631	41,039	1,243,269	241,356	13,845	3,805
East South Central	711,342	20,131	545,592	131,847	11,206	966
West South Central	1,105,165	12,118	846,896	212,816	27,626	4,085
Mountain	574,647	32,513	438,683	88,696	13,847	737
Pacific	2,030,812	112,335	1,590,072	285,366	41,096	1,776
	CURRENT SOLD (KILOWATT-HOURS)					
UNITED STATES	62,147,695,152	1,488,105,684	10,410,749,374	10,793,767,814	31,931,212,851	1,746,288,517
GEOGRAPHIC DIVISIONS						
New England	4,290,511,092	25,310,858	924,346,000	646,657,071	2,299,536,717	169,159,385
Middle Atlantic	17,958,078,110	78,618,899	2,865,333,570	2,466,846,647	10,249,531,218	564,635,814
East North Central	13,858,255,470	131,664,470	2,538,154,490	2,511,712,019	6,605,987,060	334,503,307
West North Central	4,291,831,973	40,300,812	878,526,654	1,052,348,266	1,749,673,095	157,921,876
South Atlantic	6,437,552,692	38,647,654	845,848,593	906,020,094	4,082,639,359	149,149,526
East South Central	2,824,340,875	17,097,546	314,398,734	354,515,280	1,890,517,407	56,211,682
West South Central	3,313,213,401	30,982,179	450,418,464	637,149,383	1,823,249,828	119,091,718
Mountain	1,882,777,296	74,417,363	300,520,749	282,117,473	1,057,170,838	45,870,278
Pacific	7,291,134,243	1,051,065,903	1,293,202,120	1,936,401,581	2,172,907,329	149,744,931
	REVENUE FROM ELECTRIC SERVICE					
UNITED STATES	$1,703,303,728	$41,874,996	$584,995,286	$459,440,913	$475,738,880	$81,795,213
GEOGRAPHIC DIVISIONS						
New England	147,344,841	1,614,277	57,406,456	35,920,775	40,152,762	9,327,784
Middle Atlantic	533,988,031	5,011,649	180,343,584	132,016,757	165,771,225	31,007,534
East North Central	384,521,090	8,624,040	134,080,222	105,540,341	104,879,899	14,264,992
West North Central	135,608,719	3,380,583	50,316,419	44,399,017	26,608,263	6,552,954
South Atlantic	147,473,850	2,109,255	46,866,888	36,716,354	50,910,689	7,405,556
East South Central	61,979,939	1,116,632	19,077,167	16,762,675	20,547,848	2,594,158
West South Central	94,601,428	1,211,856	29,987,240	28,930,232	28,363,896	3,580,619
Mountain	49,311,539	2,165,626	16,125,671	13,752,393	13,870,776	1,988,929
Pacific	148,474,291	16,641,078	50,791,639	45,402,369	24,633,522	5,072,687
	AVERAGE REVENUE PER KILOWATT-HOUR (CENTS)					
UNITED STATES	2.7	2.8	5.6	4.3	1.5	4.7
GEOGRAPHIC DIVISIONS						
New England	3.4	6.4	6.2	5.6	1.7	5.5
Middle Atlantic	3.0	6.4	6.3	5.4	1.6	5.5
East North Central	2.8	6.6	5.3	4.2	1.6	4.3
West North Central	3.2	8.4	5.7	4.2	1.5	4.1
South Atlantic	2.3	5.5	5.5	4.1	1.2	5.0
East South Central	2.2	6.5	6.1	4.7	1.1	4.6
West South Central	2.9	3.9	6.7	4.5	1.6	3.0
Mountain	2.6	2.9	5.4	4.9	1.3	4.3
Pacific	2.0	1.6	3.9	2.3	1.1	3.4

[1] Includes data for "Street and interurban railways", "Electrified-steam railroad divisions", and "Other service", not shown separately by geographic divisions.

TABLE 41.—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, ULTIMATE CONSUMERS ONLY, BY CLASS OF SERVICE, MUNICIPAL ESTABLISHMENTS, BY GEOGRAPHIC DIVISIONS: 1932

DIVISION	Total [1]	Farm service (all uses)	Domestic service	COMMERCIAL SERVICE		Municipal street lighting
				Small light and power (retail)	Large light and power (wholesale)	
	NUMBER OF CUSTOMERS					
UNITED STATES	2,227,749	21,061	1,947,684	243,468	14,364	835
GEOGRAPHIC DIVISIONS						
New England	161,035	2,102	143,888	12,547	2,369	87
Middle Atlantic	140,590	1,327	127,591	10,326	1,246	82
East North Central	506,851	9,060	445,515	50,078	1,812	209
West North Central	405,286	4,432	359,384	39,335	1,835	256
South Atlantic	233,913	2,442	206,984	22,964	1,430	74
East South Central	62,030	383	56,619	4,903	103	16
West South Central	129,422	830	115,848	11,845	854	34
Mountain	59,204	380	50,758	7,798	216	42
Pacific	529,418	105	441,097	83,672	4,499	35
	CURRENT SOLD (KILOWATT-HOURS)					
UNITED STATES	3,748,280,683	16,151,422	1,379,390,137	1,265,696,163	448,863,369	489,379,847
GEOGRAPHIC DIVISIONS						
New England	197,449,878	1,420,297	94,253,909	38,985,973	40,890,642	17,669,777
Middle Atlantic	168,719,777	1,513,074	76,636,090	36,644,758	31,505,965	14,981,041
East North Central	1,035,896,014	6,838,685	316,453,300	202,670,038	148,181,105	286,597,891
West North Central	462,515,192	3,163,045	240,577,960	107,014,469	79,485,808	26,653,844
South Atlantic	312,822,391	1,883,195	152,587,670	97,135,274	28,660,993	23,795,352
East South Central	66,203,438	315,953	40,267,537	16,308,533	2,376,428	6,139,760
West South Central	150,543,380	362,262	81,854,732	40,068,834	15,910,703	5,545,246
Mountain	75,644,061	561,726	35,849,518	21,995,105	10,644,853	5,602,845
Pacific	1,278,486,552	93,185	340,909,421	704,873,179	91,206,872	102,394,091
	REVENUE FROM ELECTRIC SERVICE					
UNITED STATES	$117,801,796	$898,830	$64,769,464	$32,411,579	$7,651,769	$10,215,432
GEOGRAPHIC DIVISIONS						
New England	7,696,518	66,057	4,661,800	1,426,805	906,311	545,015
Middle Atlantic	6,994,932	79,318	4,391,027	1,310,817	676,293	430,505
East North Central	28,526,067	334,574	14,626,933	6,112,737	2,328,194	4,340,477
West North Central	19,526,787	227,531	12,777,313	4,432,521	1,132,676	804,304
South Atlantic	13,618,051	120,193	8,388,254	3,379,334	651,370	883,802
East South Central	3,175,961	18,944	2,328,163	644,803	71,664	98,555
West South Central	6,865,422	27,470	4,693,167	1,510,501	352,032	175,941
Mountain	2,989,871	20,598	1,751,040	824,694	226,782	147,906
Pacific	28,408,187	4,145	11,151,767	12,769,367	1,306,447	2,788,926
	AVERAGE REVENUE PER KILOWATT-HOUR (CENTS)					
UNITED STATES	3.1	5.6	4.7	2.6	1.7	2.1
GEOGRAPHIC DIVISIONS						
New England	3.9	4.7	4.9	3.7	2.2	3.1
Middle Atlantic	4.1	5.2	5.7	3.6	2.1	2.9
East North Central	2.8	4.9	4.6	3.0	1.6	1.5
West North Central	4.2	7.2	5.3	4.1	1.4	3.0
South Atlantic	4.4	6.4	5.5	3.5	2.3	3.7
East South Central	4.8	6.0	5.8	4.0	3.0	1.6
West South Central	4.6	7.6	5.7	3.8	2.2	3.2
Mountain	4.0	3.7	4.9	3.7	2.1	2.6
Pacific	2.2	4.4	3.3	1.8	1.4	2.7

[1] Includes data for "Street and interurban railways", "Electrified steam-railroad divisions", and "Other service", not shown separately by geographic divisions.

TABLE 42.—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, ULTIMATE CONSUMERS ONLY, WITH AVERAGES PER CUSTOMER AND PER KILOWATT-HOUR, BY CLASS OF SERVICE, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1932

CLASS OF SERVICE	Total	Commercial	Municipal
	NUMBER OF CUSTOMERS		
Total	23,858,411	21,630,662	2,227,749
Farm service (all uses)	613,753	592,692	21,061
Domestic service	19,285,560	17,337,876	1,947,684
Commercial service:			
Small light and power (retail)	3,527,794	3,284,326	243,468
Large light and power (wholesale)	379,402	365,038	14,364
Municipal street lighting	29,832	28,997	835
Railroads (motive power):			
Street and interurban	474	454	20
Electrified steam-railroad divisions	367	363	4
Other service	21,229	20,916	313
	CURRENT SOLD (KILOWATT-HOURS)		
Total	65,895,975,835	62,147,695,152	3,748,280,683
Farm service (all uses)	1,504,257,106	1,488,105,684	16,151,422
Domestic service	11,790,139,511	10,410,749,374	1,379,390,137
Commercial service:			
Small light and power (retail)	12,059,463,977	10,793,767,814	1,265,696,163
Large light and power (wholesale)	32,380,076,220	31,931,212,851	448,863,369
Municipal street lighting	2,235,668,364	1,746,288,517	489,379,847
Railroads (motive power):			
Street and interurban	4,392,943,247	4,348,207,607	44,735,640
Electrified steam-railroad divisions	762,204,863	762,115,347	89,516
Other service	771,222,547	667,247,958	103,974,589
	CURRENT SOLD PER CUSTOMER (KILOWATT-HOURS)		
Total	2,762	2,873	1,683
Farm service (all uses)	2,451	2,511	767
Domestic service	611	600	708
Commercial service:			
Small light and power (retail)	3,418	3,286	5,199
Large light and power (wholesale)	85,345	87,474	31,249
Municipal street lighting	74,942	60,223	586,084
Railroads (motive power):			
Street and interurban	9,267,813	9,577,550	2,236,782
Electrified steam-railroad divisions	2,076,852	2,099,491	22,379
Other service	36,329	31,901	332,187
	REVENUE FROM ELECTRIC SERVICE		
Total	$1,821,105,524	$1,703,303,728	$117,801,796
Farm service (all uses)	42,773,826	41,874,996	898,830
Domestic service	649,764,750	584,995,286	64,769,464
Commercial service:			
Small light and power (retail)	491,852,492	459,440,913	32,411,579
Large light and power (wholesale)	483,390,649	475,738,880	7,651,769
Municipal street lighting	92,010,645	81,795,213	10,215,432
Railroads (motive power):			
Street and interurban	38,777,175	38,296,902	480,273
Electrified steam-railroad divisions	7,018,519	7,015,342	3,177
Other service	15,517,468	14,146,196	1,371,272

TABLE 42.—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, ULTIMATE CONSUMERS ONLY, WITH AVERAGES PER CUSTOMER AND PER KILOWATT-HOUR, BY CLASS OF SERVICE, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1932—Continued

CLASS OF SERVICE	Total	Commercial	Municipal
	REVENUE PER CUSTOMER		
Total	$76	$79	$53
Farm service (all uses)	70	71	43
Domestic service	34	34	33
Commercial service:			
Small light and power (retail)	139	140	133
Large light and power (wholesale)	1,274	1,303	532
Municipal street lighting	3,084	2,821	12,234
Railroads (motive power):			
Street and interurban	81,808	84,354	24,014
Electrified steam-railroad divisions	19,124	19,326	794
Other service	731	676	4,381
	REVENUE PER KILOWATT-HOUR (CENTS)		
Total	2.8	2.7	3.1
Farm service (all uses)	2.8	2.8	5.6
Domestic service	5.5	5.6	4.7
Commercial service:			
Small light and power (retail)	4.1	4.3	2.6
Large light and power (wholesale)	1.5	1.5	1.7
Municipal street lighting	4.1	4.7	2.1
Railroads (motive power):			
Street and interurban	.9	.9	1.1
Electrified steam-railroad divisions	.9	.9	3.5
Other service	2.0	2.1	1.3

TABLE 43.—SALARIED EMPLOYEES AND WAGE EARNERS, NUMBER, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1902 TO 1932

CENSUS YEAR	NUMBER OF EMPLOYEES					
	Total		Commercial		Municipal	
	Salaried employees	Wage earners	Salaried employees	Wage earners	Salaried employees	Wage earners
1932 [a]	110,453	134,120	103,017	[1] 122,540	7,436	11,580
1927	101,415	149,605	95,951	[2] 138,796	5,464	10,809
1922	55,112	95,650	50,667	[3] 85,438	4,445	10,212
1917	35,406	70,135	32,592	[4] 62,087	2,814	8,048
1912	26,093	53,242	23,877	[5] 47,518	2,216	5,724
1907	12,990	34,642	11,375	30,691	1,615	3,951
1902	6,996	23,330	6,046	20,863	950	2,467

[1] Number June 30, 1932, or nearest representative day.
[2] Number June 30, 1927, or nearest representative day.
[3] Number June 30, 1922, or nearest representative day.
[4] Number September 29, 1917, or nearest representative day.
[5] Number September 16, 1912, or nearest representative day.

[a] Since the schedule did not state specifically that persons engaged exclusively on construction should be omitted, data may include some thus employed. However, during the year 1932, few companies were engaged in construction work.

TABLE 44.—TOTAL SALES—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	NUMBER OF CUSTOMERS [1]			CURRENT SOLD, KILOWATT-HOURS [1]			REVENUE FROM ELECTRIC SERVICE [1]		
	Total	Commercial	Municipal	Total	Commercial	Municipal	Total	Commercial	Municipal
UNITED STATES	23,861,642	21,633,602	2,228,040	88,265,073,126	83,936,789,411	4,328,283,715	$1,975,303,955	$1,854,109,509	$121,194,446
GEOGRAPHIC DIVISIONS:									
New England	2,225,938	2,064,858	161,080	8,120,190,941	7,905,336,782	214,854,159	182,797,544	174,926,748	7,870,796
Middle Atlantic	6,675,352	6,534,759	140,593	21,967,213,770	21,765,758,443	201,455,327	559,818,749	552,671,412	7,147,337
East North Central	5,651,145	5,144,255	506,890	21,546,548,547	20,498,878,692	1,047,669,855	461,061,595	432,424,494	28,637,101
West North Central	2,327,587	1,922,190	405,397	5,866,945,224	5,385,844,852	481,100,372	165,960,425	146,071,089	19,889,336
South Atlantic	1,778,954	1,545,003	233,951	9,388,092,655	9,064,571,543	323,521,112	180,233,065	166,469,748	13,763,317
East South Central	773,496	711,463	62,033	3,624,347,396	3,557,534,558	66,812,838	70,267,238	67,078,628	3,188,610
West South Central	1,234,780	1,105,348	129,432	4,520,804,960	4,369,735,012	151,069,948	108,975,164	102,093,709	6,881,455
Mountain	634,003	574,784	59,219	2,321,594,425	2,240,821,807	80,772,618	55,333,696	52,290,799	3,042,897
Pacific	2,560,387	2,030,942	529,445	10,909,335,208	9,148,307,722	1,761,027,486	190,856,479	160,082,882	30,773,597
NEW ENGLAND:									
Maine	186,606	182,543	4,063	677,696,825	672,633,110	5,063,715	12,832,420	12,630,043	202,377
New Hampshire	120,600	117,014	3,586	721,651,318	718,477,220	3,174,098	12,039,340	11,873,955	165,385
Vermont and Rhode Island [2]	270,346	254,741	15,605	1,181,964,351	1,158,147,334	23,817,017	23,549,001	22,785,293	763,708
Massachusetts	1,206,509	1,088,596	117,913	4,289,019,727	4,134,421,217	154,598,510	97,800,160	92,240,230	5,559,930
Connecticut	441,877	421,964	19,913	1,249,858,720	1,221,657,901	28,200,819	36,576,623	35,397,227	1,179,396
MIDDLE ATLANTIC:									
New York	3,532,177	3,454,121	78,056	10,868,566,547	10,734,674,526	133,892,021	291,454,978	287,463,894	3,991,084
New Jersey	1,099,750	1,083,390	16,360	2,465,761,268	2,451,344,133	14,417,135	86,362,157	85,458,740	903,417
Pennsylvania	2,043,425	1,997,248	46,177	8,632,885,955	8,579,739,784	53,146,171	182,001,614	179,748,778	2,252,836
EAST NORTH CENTRAL:									
Ohio	1,506,421	1,345,830	160,591	5,185,327,153	4,916,122,561	269,204,592	118,419,818	109,868,259	8,551,559
Indiana	653,300	531,959	121,341	2,912,463,740	2,744,442,035	168,021,705	56,803,151	50,836,118	5,967,033
Illinois	1,808,753	1,747,800	60,953	8,369,017,621	8,125,886,506	243,131,115	160,090,996	155,657,727	4,433,269
Michigan	1,050,628	958,328	92,300	3,108,963,299	2,845,638,193	263,325,106	78,390,320	72,287,161	6,103,159
Wisconsin	632,043	560,338	71,705	1,970,776,734	1,866,789,397	103,987,337	47,357,310	43,775,229	3,582,081
WEST NORTH CENTRAL:									
Minnesota	484,216	399,303	84,913	1,109,421,519	1,017,901,153	91,520,366	35,145,770	30,644,292	4,501,478
Iowa	460,770	394,222	66,548	949,496,363	882,693,653	66,802,710	30,963,097	28,062,275	2,900,822
Missouri	655,872	599,690	56,182	2,329,239,304	2,262,714,286	66,525,018	50,763,111	48,133,401	2,629,710
North Dakota	70,091	65,187	4,904	93,332,632	88,567,219	4,765,413	4,887,200	4,586,923	300,277
South Dakota	85,087	69,910	15,177	110,347,354	92,940,971	17,406,383	5,806,185	4,806,783	999,402
Nebraska	236,149	166,441	69,708	538,441,641	469,403,161	69,038,480	16,524,258	13,223,552	3,300,706
Kansas	335,402	227,437	107,965	736,666,411	571,624,409	165,042,002	21,870,804	16,613,863	5,256,941

SOUTH ATLANTIC:									
Delaware, District of Columbia, Maryland, and West Virginia [2]	691, 689	669, 761	21, 928	3, 534, 430, 493	3, 512, 658, 836	21, 771, 657	65, 838, 413	64, 808, 457	1, 029, 956
Virginia	267, 667	249, 248	18, 419	895, 833, 163	863, 125, 944	32, 707, 219	22, 291, 738	21, 175, 170	1, 116, 568
North Carolina	262, 924	197, 478	65, 446	2, 211, 247, 954	2, 134, 459, 273	76, 788, 681	31, 240, 480	27, 844, 238	3, 396, 242
South Carolina	107, 240	87, 166	20, 074	1, 230, 030, 529	1, 207, 481, 357	22, 549, 172	16, 919, 278	15, 977, 957	941, 321
Georgia	211, 705	171, 816	39, 889	1, 015, 356, 083	971, 150, 570	44, 205, 513	22, 723, 200	20, 794, 855	1, 928, 345
Florida	237, 729	169, 534	68, 195	501, 194, 433	375, 695, 563	125, 498, 870	21, 219, 956	15, 869, 071	5, 350, 885
EAST SOUTH CENTRAL:									
Kentucky	272, 546	252, 980	19, 566	866, 872, 173	848, 492, 661	18, 379, 512	21, 236, 042	20, 503, 545	732, 497
Tennessee	238, 045	224, 477	13, 568	1, 087, 940, 890	1, 069, 456, 972	18, 483, 918	20, 624, 558	19, 898, 452	726, 106
Alabama	171, 136	160, 302	10, 834	1, 467, 957, 507	1, 456, 550, 545	11, 406, 962	20, 807, 527	20, 157, 946	649, 581
Mississippi	91, 769	73, 704	18, 065	201, 576, 826	183, 034, 380	18, 542, 446	7, 599, 111	6, 518, 685	1, 080, 426
WEST SOUTH CENTRAL:									
Arkansas	115, 999	103, 252	12, 747	342, 058, 183	330, 205, 106	11, 853, 077	10, 205, 652	9, 575, 828	629, 824
Louisiana	191, 252	164, 791	26, 461	1, 158, 348, 096	1, 126, 763, 215	31, 584, 881	19, 960, 221	18, 430, 755	1, 529, 466
Oklahoma	267, 875	221, 455	46, 420	719, 146, 688	670, 770, 358	48, 376, 330	20, 883, 965	18, 650, 990	2, 232, 975
Texas	659, 654	615, 850	43, 804	2, 301, 251, 993	2, 241, 996, 333	59, 255, 660	57, 925, 326	55, 436, 136	2, 489, 190
MOUNTAIN:									
Montana and Utah [2]	194, 902	176, 032	18, 870	917, 592, 592	898, 551, 789	19, 040, 803	18, 046, 376	17, 390, 023	656, 353
Idaho	77, 756	70, 577	7, 179	507, 611, 143	490, 192, 286	17, 418, 857	7, 271, 946	6, 804, 268	467, 678
Wyoming	34, 677	30, 774	3, 903	68, 775, 290	64, 813, 843	3, 961, 447	2, 999, 994	2, 784, 159	215, 835
Colorado	207, 592	182, 325	25, 267	371, 022, 453	336, 657, 181	34, 365, 272	14, 564, 489	13, 186, 154	1, 378, 335
Arizona and New Mexico [2]	98, 707	96, 203	2, 504	367, 187, 253	363, 408, 637	3, 778, 616	10, 030, 368	9, 814, 047	216, 321
Nevada	20, 369	18, 873	1, 496	89, 405, 694	87, 198, 071	2, 207, 623	2, 420, 523	2, 312, 148	108, 375
PACIFIC:									
Washington	417, 526	279, 220	138, 306	2, 371, 535, 171	1, 917, 408, 104	454, 127, 067	31, 778, 035	24, 073, 535	7, 704, 500
Oregon	237, 338	224, 018	13, 320	820, 740, 885	789, 202, 887	31, 537, 998	16, 417, 335	15, 655, 057	762, 278
California	1, 905, 523	1, 527, 704	377, 819	7, 717, 059, 152	6, 441, 696, 731	1, 275, 362, 421	142, 661, 109	120, 354, 290	22, 306, 819

[1] Includes figures relating to "Sales for resale" as follows: Number of customers, 2,940 (commercial), 291 (municipal); kilowatt-hours sold, 21,789,094,259 (commercial), 580,003,032 (municipal); revenue from electric service, $150,805,781 (commercial), $3,392,650 (municipal).

[2] Combined to avoid disclosing the operations of individual establishments.

TABLE 45.—DOMESTIC SERVICE AND COMMERCIAL SERVICE—SMALL LIGHT AND POWER (RETAIL), COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932

DIVISION AND STATE	DOMESTIC SERVICE											
	Number of customers		Current sold				Revenue from electric service					
			Kilowatt-hours		Average kilowatt-hours per customer		Amount		Average per customer (dollars)		Average per kilowatt-hour (cents)	
	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal
UNITED STATES	17,337,876	1,947,684	10,410,749,374	1,379,390,137	600	708	$584,995,286	$64,769,464	34	33	5.6	4.7
GEOGRAPHIC DIVISIONS:												
New England	1,702,520	143,888	924,346,000	94,253,909	543	655	57,406,456	4,661,800	34	32	6.2	4.9
Middle Atlantic	5,298,865	127,591	2,865,333,570	76,636,090	541	601	180,343,584	4,391,027	34	34	6.3	5.7
East North Central	4,161,222	445,515	2,538,154,490	316,453,300	610	710	134,080,222	14,626,933	32	33	5.3	4.6
West North Central	1,510,757	359,384	878,526,654	240,577,960	582	669	50,316,419	12,777,313	33	36	5.7	5.3
South Atlantic	1,243,269	206,984	845,848,593	152,587,670	680	737	46,866,888	8,388,254	38	41	5.5	5.5
East South Central	545,592	56,619	314,398,734	40,267,537	576	711	19,077,167	2,328,163	35	41	6.1	5.8
West South Central	846,896	115,848	450,418,464	81,854,732	532	707	29,987,240	4,693,167	35	41	6.7	5.7
Mountain	438,683	50,758	300,520,749	35,849,518	685	706	16,125,671	1,751,040	37	34	5.4	4.9
Pacific	1,590,072	441,097	1,293,202,120	340,909,421	813	773	50,791,639	11,151,767	32	25	3.9	3.3
NEW ENGLAND:												
Maine	132,084	3,516	67,444,765	1,271,241	511	362	4,324,232	92,945	33	26	6.4	7.3
New Hampshire	89,145	3,027	40,323,552	2,035,488	452	672	2,958,237	118,198	33	39	7.3	5.8
Vermont and Rhode Island [1]	209,223	13,373	98,126,561	6,452,854	469	483	6,925,016	377,575	33	28	7.1	5.9
Massachusetts	900,533	107,196	452,702,940	74,378,448	503	694	28,662,293	3,512,684	32	33	6.3	4.7
Connecticut	371,535	16,776	265,748,182	10,115,878	715	603	14,536,678	560,398	39	33	5.5	5.5
MIDDLE ATLANTIC:												
New York	2,783,695	70,006	1,456,397,002	45,637,513	523	652	91,223,936	2,359,129	33	34	6.3	*
New Jersey	865,363	15,217	434,535,984	7,549,981	502	496	31,804,985	622,257	37	41	7.3	5.2
Pennsylvania	1,649,807	42,368	974,400,584	23,448,596	591	553	57,314,663	1,409,641	35	33	5.9	8.2
EAST NORTH CENTRAL:												
Ohio	1,096,460	141,568	657,403,095	95,825,243	600	677	35,999,930	4,317,956	33	31	5.5	4.5
Indiana	412,949	106,927	201,897,765	76,208,906	489	713	12,988,129	3,610,827	31	34	6.4	4.7
Illinois	1,451,742	56,184	908,402,711	39,284,607	626	699	48,277,064	2,109,609	33	38	5.3	5.4
Michigan	774,458	80,098	526,560,534	64,609,715	680	807	23,490,559	2,464,119	30	31	4.5	3.8
Wisconsin	425,613	60,738	243,890,385	40,524,829	573	667	13,324,540	2,124,422	31	35	5.5	5.2

WEST NORTH CENTRAL:												
Minnesota	313,645	75,019	185,544,107	52,661,220	592	702	10,666,708	2,852,318	34	38	5.7	5.4
Iowa	314,712	57,861	162,639,594	32,836,699	517	568	11,101,373	1,846,027	35	32	6.8	5.6
Missouri	485,305	50,310	308,693,939	40,065,544	636	796	15,096,831	1,823,638	31	36	4.9	4.6
North Dakota	45,761	4,283	26,414,677	3,067,094	577	716	1,831,321	232,607	40	54	6.9	7.6
South Dakota	48,635	13,220	25,422,118	8,535,856	523	646	1,810,124	609,349	37	46	7.1	7.1
Nebraska	129,424	61,243	80,123,349	36,727,015	619	600	4,494,474	2,126,555	35	35	5.6	5.8
Kansas	173,275	97,448	89,638,870	66,684,532	518	684	5,315,588	3,286,819	31	34	5.9	4.9
SOUTH ATLANTIC:												
Delaware, District of Columbia, Maryland, and West Virginia [1]	562,537	19,938	379,415,277	12,652,530	674	635	18,915,176	709,010	34	36	5.0	5.6
Virginia	192,528	15,910	130,082,916	12,895,636	676	811	7,438,302	615,665	39	39	5.7	4.8
North Carolina	164,765	57,188	109,401,832	37,163,164	664	650	6,380,684	2,136,939	39	37	5.8	5.8
South Carolina	69,490	17,642	48,124,301	14,035,349	693	798	2,843,509	638,983	41	36	5.9	4.5
Georgia	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Florida	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
EAST SOUTH CENTRAL:												
Kentucky	201,744	18,660	101,647,092	9,953,280	504	533	6,393,163	547,423	32	29	6.3	5.5
Tennessee	175,982	12,012	102,869,403	8,918,442	585	742	6,503,587	430,041	37	36	6.3	4.8
Alabama	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Mississippi	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
WEST SOUTH CENTRAL:												
Arkansas	76,331	11,835	35,741,483	8,218,741	468	694	2,718,579	493,351	36	42	7.6	6.0
Louisiana	130,769	23,790	64,992,547	17,369,034	497	730	5,224,999	1,029,090	40	43	8.0	5.9
Oklahoma	162,569	41,168	84,142,909	27,310,181	518	663	5,475,097	1,498,963	34	36	6.5	5.5
Texas	477,227	39,055	265,541,525	28,956,776	556	741	16,568,565	1,671,763	35	43	6.2	5.8
MOUNTAIN:												
Montana and Utah [1]	138,469	16,665	103,999,871	8,904,844	751	534	4,986,639	416,709	36	25	4.8	4.7
Idaho	45,826	5,945	51,510,573	8,911,683	1,124	1,499	1,878,178	285,364	41	48	3.6	3.2
Wyoming	24,086	3,341	14,070,705	2,713,902	584	812	969,445	164,512	40	49	6.9	6.1
Colorado	141,112	21,256	70,657,333	13,114,506	501	617	4,429,058	721,618	31	34	6.3	5.5
Arizona and New Mexico [1]	75,017	2,200	45,373,114	1,103,262	605	504	3,143,064	89,065	42	40	6.9	8.0
Nevada	14,173	1,351	14,909,153	1,096,321	1,052	811	719,287	73,772	51	55	4.8	6.7
PACIFIC:												
Washington	201,926	117,898	245,181,706	142,308,261	1,214	1,207	6,983,644	3,590,977	35	30	2.8	2.5
Oregon	175,494	11,316	171,596,142	15,635,351	978	1,382	5,582,160	433,509	32	38	3.3	2.8
California	1,212,652	311,883	876,424,272	182,965,809	723	587	38,225,835	7,127,281	32	23	4.4	3.9

For footnotes see p. 69.

TABLE 45.—DOMESTIC SERVICE AND COMMERCIAL SERVICE—SMALL LIGHT AND POWER (RETAIL), COMMERCIAL AND MUNICIPAL ESTABLISHMENTS, BY DIVISIONS AND STATES: 1932—Continued

DIVISION AND STATE	COMMERCIAL SERVICE—SMALL LIGHT AND POWER (RETAIL)											
	NUMBER OF CUSTOMERS		Current sold				Revenue from electric service					
			Kilowatt-hours		Average kilowatt-hours per customer		Amount		Average per customer (dollars)		Average per kilowatt-hour (cents)	
	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal	Commercial	Municipal
UNITED STATES	3,284,326	243,468	10,793,767,814	1,265,696,163	3,286	5,199	$459,440,913	$32,411,579	140	133	4.3	2.6
GEOGRAPHIC DIVISIONS:												
New England	279,766	12,547	646,657,071	38,985,973	2,311	3,107	35,920,775	1,426,805	128	114	5.6	3.7
Middle Atlantic	991,952	10,326	2,466,846,647	36,644,758	2,487	3,549	132,016,757	1,310,817	133	127	5.4	3.6
East North Central	735,705	50,078	2,511,712,019	202,670,038	3,414	4,047	105,540,341	6,112,737	143	122	4.2	3.0
West North Central	316,822	39,335	1,052,348,266	107,014,469	3,322	2,721	44,399,017	4,432,521	140	113	4.2	4.1
South Atlantic	241,356	22,904	906,020,094	97,135,274	3,754	4,230	36,716,354	3,379,334	152	147	4.1	3.5
East South Central	131,847	4,903	354,515,280	16,308,533	2,689	3,326	16,762,675	644,803	127	132	4.7	4.0
West South Central	212,816	11,845	637,149,383	40,068,834	2,994	3,383	28,930,232	1,510,501	136	128	4.5	3.8
Mountain	88,696	7,798	282,117,473	21,995,105	3,181	2,821	13,752,393	824,694	155	106	4.9	3.7
Pacific	285,366	83,672	1,936,401,581	704,873,179	6,786	8,424	45,402,369	12,769,367	159	153	2.3	1.8
NEW ENGLAND:												
Maine	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
New Hampshire	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Vermont and Rhode Island [1]	34,857	1,480	80,516,382	5,743,278	2,310	3,881	4,355,839	187,751	125	127	5.4	3.3
Massachusetts	160,870	7,699	358,057,260	23,291,039	2,226	3,025	20,599,991	842,038	128	109	5.8	3.6
Connecticut	39,571	2,513	124,182,370	8,643,819	3,138	3,440	6,536,455	347,103	165	138	5.3	4.0
MIDDLE ATLANTIC:												
New York	562,029	6,008	1,455,369,503	20,946,223	2,589	3,486	76,541,121	701,660	136	117	5.3	3.3
New Jersey	164,360	901	325,555,644	2,551,582	1,981	2,832	21,455,063	136,513	131	152	6.6	5.4
Pennsylvania	265,563	3,417	685,921,500	13,146,953	2,583	3,848	34,020,573	472,644	128	138	5.0	3.6
EAST NORTH CENTRAL:												
Ohio	177,064	15,364	647,703,633	60,196,275	3,658	3,918	25,410,581	1,899,108	144	124	3.9	3.2
Indiana	75,208	12,773	246,055,116	60,204,699	3,272	4,713	10,451,824	1,588,472	139	124	4.2	2.6
Illinois	249,316	4,551	798,258,839	18,468,688	3,202	4,058	35,001,910	546,705	140	120	4.4	3.0
Michigan	146,108	9,568	605,364,983	38,883,824	4,143	4,064	23,818,397	1,310,425	163	137	3.9	3.4
Wisconsin	88,009	7,822	214,329,448	24,916,552	2,435	3,185	10,857,629	768,027	123	98	5.1	3.1
WEST NORTH CENTRAL:												
Minnesota	58,515	8,285	186,878,613	21,877,980	3,194	2,641	7,852,169	1,039,879	134	126	4.2	4.8
Iowa	56,946	7,120	185,278,210	17,995,056	3,254	2,527	7,539,792	788,293	132	111	4.1	4.4
Missouri	98,902	5,353	419,414,105	13,606,940	4,241	2,542	16,524,380	559,620	167	105	3.9	4.1
North Dakota	16,363	586	26,544,638	1,319,405	1,622	2,252	1,679,617	53,514	103	91	6.3	4.1
South Dakota	16,342	1,865	25,796,788	5,208,110	1,579	2,793	1,530,749	260,236	94	140	5.9	5.0
Nebraska	28,419	7,361	102,379,797	21,260,749	3,603	2,888	4,232,340	811,453	149	110	4.1	3.8
Kansas	41,335	8,765	106,056,115	25,746,229	2,566	2,937	5,039,970	919,526	122	105	4.8	3.6

SOUTH ATLANTIC:												
Delaware, District of Columbia, Maryland and West Virginia [1]	92,912	1,737	370,552,780	6,211,013	3,988	3,576	13,974,269	216,772	150	125	3.8	3.5
Virginia	40,180	1,587	147,194,848	5,649,081	3,663	3,560	5,685,742	222,637	142	140	3.9	3.9
North Carolina	21,145	6,901	84,131,885	17,512,051	3,979	2,538	3,133,119	722,752	148	105	3.7	4.1
South Carolina	13,807	1,613	71,488,553	5,046,531	5,178	3,129	2,073,977	183,693	150	114	2.9	3.6
Georgia	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Florida	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
EAST SOUTH CENTRAL:												
Kentucky	39,012	873	94,862,439	3,592,873	2,432	4,116	4,623,507	120,346	119	138	4.9	3.3
Tennessee	42,167	1,162	130,511,396	6,295,389	3,095	5,418	6,132,908	198,320	145	171	4.7	3.2
Alabama	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Mississippi	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
WEST SOUTH CENTRAL:												
Arkansas	22,332	776	47,257,417	2,872,207	2,116	3,701	2,649,276	99,048	119	128	5.6	3.4
Louisiana	29,053	2,643	68,247,624	12,122,301	2,349	4,587	4,089,477	430,794	141	163	6.0	3.6
Oklahoma	41,946	4,611	75,651,400	13,484,787	1,804	2,924	4,270,235	539,776	102	117	5.6	4.0
Texas	119,485	3,815	445,992,942	11,589,539	3,733	3,038	17,921,244	440,883	150	116	4.0	3.8
MOUNTAIN:												
Montana and Utah [1]	24,489	2,036	89,187,221	4,625,927	3,642	2,272	4,009,961	172,885	164	85	4.5	3.7
Idaho	11,135	1,131	43,872,241	7,486,929	3,940	6,620	1,662,736	160,465	149	142	3.8	2.1
Wyoming	5,141	467	12,976,841	878,178	2,524	1,880	786,963	32,666	153	70	6.1	3.7
Colorado	26,941	3,734	72,482,254	6,920,856	2,690	1,853	3,822,037	340,031	142	91	5.3	4.9
Arizona and New Mexico [1]	18,016	300	46,295,707	1,924,124	2,570	6,414	2,789,227	107,145	155	357	6.0	5.6
Nevada	2,974	130	17,303,209	159,091	5,818	1,224	680,569	11,502	229	88	3.9	7.2
PACIFIC:												
Washington	37,976	17,040	302,094,491	180,802,627	7,955	10,610	7,010,300	2,399,459	185	141	2.3	1.3
Oregon	32,101	1,659	225,163,642	6,670,401	7,014	4,021	5,560,826	192,382	173	116	2.5	2.9
California	215,289	64,973	1,409,143,448	517,400,151	6,545	7,963	32,831,243	10,177,526	152	157	2.3	2.0

[1] Combined to avoid disclosing the operations of individual establishments.

[2] Withheld to avoid disclosing operations of individual establishments.

TABLE 46.—CURRENT GENERATED AND ENERGY RECEIVED FROM OTHER SOURCES, ALL ESTABLISHMENTS, BY GEOGRAPHIC DIVISIONS, 1932

DIVISION AND STATE	Total output [1] (kilowatt-hours)	Generated output (kilowatt-hours)	RECEIVED FROM OTHER SOURCES (KILOWATT-HOURS)				
			Total	Purchased from other electric companies		Purchased from other sources (electric railways, manufacturing plants, etc.)	Received from plants of same system located in other States
				In same State	In other States		
UNITED STATES, total	111,715,765,636	79,657,466,651	32,058,298,985	18,569,198,987	6,935,099,171	1,330,912,094	[2] 5,223,088,733
GEOGRAPHIC DIVISIONS:							
New England	9,430,456,514	5,330,233,841	4,100,222,673	2,527,789,488	1,402,517,324	47,268,340	122,647,521
Middle Atlantic	28,534,096,804	20,340,794,839	8,193,301,965	4,640,811,852	1,523,458,745	233,542,647	1,795,488,721
East North Central	25,134,316,444	18,106,043,295	7,028,273,149	4,575,707,636	1,468,596,579	286,572,272	[3] 697,396,662
West North Central	7,914,964,492	5,357,886,862	2,557,077,630	966,504,214	676,929,499	124,505,927	[3] 789,137,990
South Atlantic	13,317,850,247	9,458,694,089	3,859,156,158	2,003,103,660	722,676,650	230,287,498	903,088,350
East South Central	4,615,231,761	2,993,770,460	1,621,461,301	710,647,941	569,297,170	204,131,837	137,384,353
West South Central	5,519,482,453	4,308,490,556	1,210,991,897	612,408,007	290,269,648	77,130,261	231,183,981
Mountain	3,059,081,603	2,346,832,279	712,249,324	191,637,005	270,190,236	61,040,985	189,381,098
Pacific	14,190,285,318	11,414,720,430	2,775,564,888	2,340,589,184	11,163,320	66,432,327	357,380,057

[1] Includes generated output and energy received from other sources. Since the energy "Received from other sources" was, in a large part, purchased from other electric light and power companies, a considerable duplication is involved, as such energy would also be included in the "Generated."
[2] Includes data for 2 establishments reported as receiving energy from plants of same system located in same State.
[3] Includes data for 1 establishment reported as receiving energy from plants of same system located in same State.

TABLE 47.—TOTAL SALES—NUMBER OF CUSTOMERS, CURRENT SOLD, AND REVENUE FROM ELECTRIC SERVICE, COMMERCIAL AND MUNICIPAL ESTABLISHMENTS: 1917 to 1932

ITEM	1932	1927	1922	1917
Number of customers [1]	23,861,642	21,790,238	12,709,868	7,178,703
Commercial	21,633,602	19,661,370	11,065,124	6,202,189
Municipal	2,228,040	2,128,868	1,644,744	976,514
Current sold,[1] kilowatt-hours	88,265,073,126	79,011,210,518	41,964,785,034	25,751,964,800
Commercial	83,936,789,411	75,344,545,709	39,912,345,239	24,722,517,379
Municipal	4,328,283,715	3,666,664,809	2,052,439,795	1,029,447,421
Revenue from electric service [1]	$1,975,303,955	$1,802,655,493	$1,020,439,038	$502,059,980
Commercial	1,854,109,509	1,680,218,664	936,851,679	462,473,917
Municipal	121,194,446	122,436,829	83,587,359	39,586,063

[1] Includes figures relating to "Sales for resale" (see table 44, footnote 1).

TABLE 48.—CONSOLIDATED INCOME, OPERATING-REVENUE, AND EXPENSE STATEMENT, FOR COMMERCIAL ESTABLISHMENTS, 1932

ACCOUNT	Electric light and power	All other	Total
Revenue from sale of utility service	[1] $1,854,109,509	$386,155,124	$2,240,264,633
Miscellaneous revenue	19,254,945	6,537,065	25,792,010
Total operating revenue	1,873,364,454	392,692,189	2,266,056,643
Operating expenses	[2] 736,692,735	223,078,513	959,771,248
Uncollectible bills	13,903,975	2,493,925	16,397,900
Taxes (including Federal income taxes)	203,858,468	39,587,518	243,445,986
Retirement expenses	142,647,407	30,959,755	173,607,162
Total revenue deductions	1,097,102,585	296,119,711	1,393,222,296
Operating income [3]	776,261,869	96,572,478	872,834,347
Rent charge or credit to income (net)	10,827,064	4,413,533	15,241,497
Balance of income [4]	765,433,905	92,158,945	857,592,850
Nonoperating income	(5)	(5)	61,060,120
Interest and amortization of debt discount and expense	(5)	(5)	354,165,157
Other deductions from income	(5)	(5)	25,871,756
Net income, all sources	(5)	(5)	538,616,057
Retirement appropriated from surplus	22,483,464	3,637,839	26,121,303
Dividend on stock	(5)	(5)	493,723,949

[1] This total includes $1,703,303,728 revenue received from "Sales to ultimate consumer", and $150,805,781 revenue received from "Sales for resale."
[2] Includes salaries and wages, $303,058,039; purchased power, $161,120,995; cost of fuel, $102,560,395; and maintenance expense, $78,443,321.
[3] "Total operating revenue" less "Total revenue deductions."
[4] "Operating income" less "Rent charge or credit to income (net)."
[5] Segregation of "Electric light and power" and "All other" not called for on schedule.

TABLE 49.—CONSOLIDATED INCOME, OPERATING-REVENUE, AND EXPENSE STATEMENT, FOR MUNICIPAL ESTABLISHMENTS, 1932

ACCOUNT	Electric light and power	All other	Total
Revenue from sale of utility service	[1] $121,194,446	$10,042,391	$131,236,837
Miscellaneous revenue	1,345,043	380,734	1,725,777
Total operating revenue	122,539,489	10,423,125	132,962,614
Operating expenses	[2] 66,407,523	6,056,107	72,463,630
Uncollectible bills	951,997	87,756	1,039,753
Taxes (including Federal income taxes)	1,292,227	137,849	1,430,076
Retirement expenses	11,399,795	1,074,956	12,474,751
Total revenue deductions	80,051,542	7,356,668	87,408,210
Operating income [3]	42,487,947	3,066,457	45,554,404
Rent charge or credit to income (net)	33,932	[4] 7,388	26,544
Balance of income [5]	42,454,015	3,073,845	45,527,860
Nonoperating income	(6)	(6)	692,491
Interest and amortization of debt discount and expense	(6)	(6)	7,192,855
Other deductions from income	(6)	(6)	1,972,149
Net income, all sources	(6)	(6)	37,055,347
Retirement appropriated from surplus	1,485,329	194,730	1,680,059

[1] This total includes $117,801,796 revenue received from "Sales to ultimate consumer", and $3,392,650 revenue received from "Sales for resale."
[2] Includes salaries and wages, $20,822,347; purchased power, $17,779,121; cost of fuel, $9,823,030; and maintenance expense, $9,278,580.
[3] "Total operating revenue" less "Total revenue deductions."
[4] Rent credit to income.
[5] "Operating income" less "Rent charge or credit to income (net)."
[6] Segregation of "Electric light and power" and "All other" not called for on schedule.

TABLE 50.—CONSOLIDATED BALANCE SHEET FOR COMMERCIAL ESTABLISHMENTS REPORTING FOR THE CENSUS OF ELECTRIC LIGHT AND POWER STATIONS, INCLUDING ASSETS AND LIABILITIES OF ALLIED NONELECTRIC INDUSTRIES, DECEMBER 31, 1932

ASSETS		LIABILITIES	
Kind	Amount	Kind	Amount
Fixed capital,[1] total	$14,370,420,592	Capital stocks	$6,935,848,539
Electric light and power	12,124,807,425	Cash investments (for unincorporated companies)	6,867,895
Electric railway	367,048,585	Long-term debt	6,678,761,901
Gas	1,388,140,091	Current liabilities	641,271,132
All other utilities	490,424,491	Retirement reserves	1,141,066,600
Investments	957,027,793	Other reserves	240,500,274
Current assets	943,026,889	Other credit items [2]	379,793,348
Unamortized debt discount and expense.	377,943,409	Surplus	1,068,429,931
Other debit items [3]	364,284,962		
Deficit	19,835,975	Total liabilities	17,032,539,620
Total assets	17,032,539,620		

[1] Plant and equipment, real estate, etc.
[2] Includes $106,038,491 reported as "Advances from affiliated companies."
[3] Includes $35,120,680 reported as "Advances to affiliated companies."

TABLE 51.—CONSOLIDATED BALANCE SHEET FOR MUNICIPAL ESTABLISHMENTS REPORTING FOR THE CENSUS OF ELECTRIC LIGHT AND POWER STATIONS, INCLUDING ASSETS AND LIABILITIES OF ALLIED NONELECTRIC INDUSTRIES, DECEMBER 31, 1932

ASSETS		LIABILITIES	
Kind	Amount	Kind	Amount
Fixed capital,[1] total	$613,076,599	Cash investments (for unincorporated companies)	$250,319,737
Electric light and power	539,569,527	Long-term debt	208,975,676
Electric railway	1,601,886	Current liabilities	14,713,974
Gas	7,384,007	Retirement reserves	77,209,501
All other utilities	64,521,179	Other reserves	14,738,031
Investments	14,941,751	Other credit items	19,034,968
Current assets	64,836,005	Surplus	125,150,982
Unamortized debt discount and expense	3,524,486	Total liabilities	710,142,869
Other debit items	13,171,992		
Deficit	592,036		
Total assets	710,142,869		

[1] Plant and equipment, real estate, etc.