

GROWTH OF LOAD.

The total connected load at end of the year under review was 1,676,689 kW., compared with 1,476,487 for 1937, an increase of 200,202 kW., or 13·55 per cent.

Statistics pertaining to the increasing use of electric ranges, electric water-heaters, and milking-machines have been collected and scheduled for some years past, and from the following table will be seen the annual growth which has taken place in each class :—

Year.	Route-miles of Line in Service.	Consumers.	Annual Increase.	Electric Ranges.	Annual Increase.	Electric Water-heaters.	Annual Increase.	Electrically-driven Milking-machines.	Annual Increase.
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1925 ..	6,011	148,699	..	1,526	..	..	..	3,581	..
1926 ..	12,454	192,392	29·3	4,671	205·0	6,654	..	4,856	35·8
1927 ..	14,975	228,345	18·7	9,511	104·0	14,160	113·0	6,738	38·8
1928 ..	17,063	243,795	6·8	15,766	66·0	21,513	52·0	8,514	26·3
1929 ..	17,759	266,306	9·2	20,254	28·5	29,257	36·0	10,161	19·4
1930 ..	19,128	284,235	6·7	25,997	28·3	37,564	28·5	11,922	17·3
1931 ..	19,636	300,809	5·9	29,480	13·2	42,803	13·9	13,656	14·5
1932 ..	20,251	309,360	2·8	31,973	8·5	45,796	7·1	14,163	3·7
1933 ..	20,585	322,997	4·4	33,998	6·4	48,070	5·0	15,913	12·4
1934 ..	20,996	334,593	3·6	36,081	6·2	50,272	4·6	16,992	6·8
1935 ..	21,707	342,334	2·3	39,730	10·1	53,635	6·7	17,200	1·2
1936 ..	22,424	355,973	4·0	44,837	12·9	58,864	9·8	18,458	7·4
1937 ..	23,322	371,027	4·2	53,402	19·1	67,049	13·9	20,275	9·8
1938 ..	24,407	388,580	4·7	64,408	20·6	77,353	15·4	22,711	12·4

The total increase in route-miles of line for the above thirteen-year period is 307 per cent.

See Table XIV for details of ranges, water-heaters, and milking-machines for year ended 31st March, 1938.

CONDENSED REVIEW OF ELECTRICAL PROGRESS.

During the year the statistical records collected over the past fourteen years have been condensed into graph form, and the graphs on the next page contain the following information as at the end of each financial year from 1925 to 1938 inclusive :—

Graph No. 1.—(a) Number of units generated; (b) number of units sold (retail); (c) number of units sold per consumer (average); (d) number of units sold *per capita* (average).

Graph No. 2.—(a) Number of electric water-heaters installed; (b) number of electric ranges installed; (c) number of electric milking-machines installed.

Graph No. 3.—(a) Number of consumers per route-mile of line in operation; (b) Number of consumers supplied; (c) number of route-miles of line in operation; (d) total connected load, in kilowatts.

Graph No. 4.—(a) Revenue received from retail sales of electricity (pounds); (b) total working-costs (excluding bulk purchases) (pounds); (c) total capital charges (pounds); (d) total annual costs (pounds); (e) average revenue per unit sold (pence).

The curve for total capital charges on Graph No. 4 shows a sharp peak for year 1933. This is due to Arapuni again being brought into operation following the shutdown between 1930 and 1932 and to the resumption of extensions by supply authorities after the depression. The fall in the curve between 1933 and 1934 may be attributed to the reduction in interest rates resulting from the operation of the Local Authorities' Interest Reduction and Loans Conversion Act, 1932-33.

The fall in the curve for total working costs from 1932 to 1934 is due to the effect of salary and wage reductions consequent on the depression, and the rise from 1934 onwards may be attributed to the return of prosperity and the introduction of the forty-hour week.

Corresponding tendencies are evident in the revenue curve. The significant feature revealed by this graph (No. 4) is the curve depicting the average revenue per unit sold. This figure shows a consistent falling tendency from 2·133d. in 1925 down to 1·028d. in 1938.